



METROPOLITAN  
**Nashville**  
PUBLIC SCHOOLS

**OPERATIONAL AND PERFORMANCE  
AUDIT REPORT OF METROPOLITAN  
NASHVILLE PUBLIC SCHOOLS**

*SUBMITTED TO:*  
**METROPOLITAN NASHVILLE  
GOVERNMENT**

*ATTENTION:*  
MARK SWANN  
METROPOLITAN GOVERNMENT AUDITOR

**FEBRUARY 10, 2015**



**McCONNELL JONES LANIER & MURPHY LLP**  
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## METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY

February 10, 2015

Dr. Jesse B. Register  
Director of Schools  
Metropolitan Nashville Public Schools  
2601 Bransford Avenue  
Nashville, Tennessee 37204

Dr. Register,

I am releasing the [Organizational and Performance Audit of Metropolitan Nashville Public Schools](#) for your review and consideration. The report satisfies our primary requested deliverable as contracted with McConnell Jones Lanier & Murphy LLP. We stand ready to coordinate upcoming presentation of the report's highlights to members of the Metropolitan Nashville Council, Metropolitan Nashville Public Schools Board of Education, and other interested parties.

Readers of the report should be cautioned that recommendations made in this report require careful consideration and, often, further analysis by management before determining the best course of action. In cases of consolidation, outsourcing, and privatization, management must team with outside parties to forge cooperative agreements that will provide lasting benefits.

As noted by your management responses, a number of the 129 report recommendations have been partially or completely implemented, thus demonstrating that the audit is already producing results. Thank you for the concerted effort provided by your staff throughout this audit process.

Sincerely,

A handwritten signature in cursive script that reads "Mark S. Swann".

Mark S. Swann

Enclosure

cc: Mayor Karl Dean  
Members of Metropolitan Nashville Council  
Members of Metropolitan Nashville Public Schools Board of Education  
Members of Metropolitan Nashville Audit Committee



February 10, 2015

Mr. Mark Swann  
Metropolitan Auditor  
Metropolitan Nashville Government  
Office of Internal Audit  
222 3<sup>rd</sup> Avenue North, Suite 401  
Nashville, TN 37201

Dear Mr. Swann:

McConnell Jones Lanier & Murphy LLP is pleased to present the final report for the Organizational and Performance Audit of Metropolitan Nashville Public Schools (the School System). We conducted the Organizational and Performance Audit in accordance with the professional services contract between our firm and the Metropolitan Nashville Government executed January 22, 2014.

The objectives of the audit were to assess the School System's major operations; review its program initiatives and evaluation methods; analyze educational spending; document instances of fraud discovered during the project (if any); and deliver draft and final reports of observations, including recommendations for improvement and fiscal impacts.

To achieve the engagement objectives, we conducted this audit in accordance with generally accepted government auditing standards. Accordingly, we reviewed background information to obtain an overall perspective of the School System's organizational structure, educational programs, and operations. We also conducted interviews, performed process walk-throughs and observations, analyzed data, deployed and tabulated surveys, and conducted a search for best practices against which we assessed the School System's overall operations.

Our review identified 129 recommendations to improve operations and business practices. In addition, we identified a net investment requirement of \$(272,463) over five years from 2015-2016 through 2019-2020. Potential outsourcing opportunities in the child nutrition, facilities, energy management, and transportation areas could yield potential savings of \$54,129,373 over the five-year period.

We are grateful for the cooperation of the School System's board, executive leadership team, departmental personnel, principals, teachers, and support staff who assisted us throughout the project. Without their cooperation and support, it would not have been possible to complete the project successfully. We are especially grateful for the leadership demonstrated throughout this engagement by Mark Swann, Metropolitan Auditor and the internal audit staff, Dr. Jesse Register, Director of Schools, and Chris Henson, Chief Financial Officer of the School System and the project liaison for this effort.

McConnell Jones Lanier & Murphy LLP genuinely appreciates the opportunity to have served Metropolitan Nashville Government and Metropolitan Nashville Public Schools.

Very truly yours,

Sharon E. Murphy  
Engagement Partner



February 10, 2015

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Metropolitan Auditor  
Metropolitan Nashville Government  
Office of Internal Audit  
222 3<sup>rd</sup> Avenue North, Suite 401  
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Very truly yours,

Sharon E. Murphy  
Engagement Partner



METROPOLITAN  
**Nashville**  
PUBLIC SCHOOLS

2601 Bransford Ave. · Nashville, TN 37204

*Jesse B. Register, Ed.D.  
Director of Schools*

February 2, 2015

Mark Swann  
Metropolitan Auditor  
Office of Internal Audit  
222 3<sup>rd</sup> Avenue North, Suite 401  
Nashville, TN 37201

Dear Mr. Swann:

This letter acknowledges Metropolitan Nashville Public Schools (MNPS) has received the final Audit Report conducted by McConnell Jones Lanier & Murphy LLP. MNPS has evaluated the observations and the recommendations in the report and our management response is attached.

MNPS would like to express appreciation for the assistance and cooperation of you and your staff throughout this process. Any recommendation for improvements that Metro Schools can consider to increase effectiveness and efficiency in our operations and service to students and the community is always welcome.

Sincerely,

Jesse Register, Ed.D.

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<sup>1</sup> Appendices available at [www.nashville.gov/Internal-Audit/Audit-Reports-By-Fiscal-Year.aspx](http://www.nashville.gov/Internal-Audit/Audit-Reports-By-Fiscal-Year.aspx)

## EXECUTIVE SUMMARY

McConnell Jones Lanier & Murphy LLP is pleased to present our final report of the review of the Metropolitan Nashville Public Schools (the School System). On January 22, 2014, Metropolitan Nashville Government engaged McConnell Jones Lanier & Murphy LLP (the review team) to conduct an Operational and Performance Audit of the School System. The objectives of the engagement were to assess the School System's major operations; review its program initiatives and evaluation methods; analyze educational spending; document instances of fraud discovered during the project, if any, and issue draft and final reports of observations including recommendations for improvement and financial impacts.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our observations and conclusions based on our audit objectives.

Metropolitan Nashville Public Schools has received the final report and has evaluated the observations and recommendations. The School System's management responses have been included at the end of each chapter in the report.

### BACKGROUND

Metropolitan Nashville Public Schools (the School System), officially formed in 1963 with the consolidation of the City of Nashville and Davidson County Schools, is one of 65 departments in the Metropolitan Nashville Government. The Metropolitan Nashville Council, which consists of 40 council members and the mayor of Nashville, performs the primary governance and administrative functions for the Metropolitan Nashville Government. The Metropolitan Nashville Council is the legislative authority that authorizes and approves the School System's operating and capital budgets, as the board of education (the board) has no taxing authority.

The School System encompasses a 533 square mile area and is the second largest school system in the state of Tennessee, and the 42nd largest school system in the United States, with 82,863 students in 157 schools; 6,326 teachers and certified staff; and 3,795 support staff. The School System has an ethnically diverse student population, which is 45 percent African American; 32 percent Anglo; 19 percent Hispanic, and 4 percent Asian. Its student population also includes 22,291 English Learners and 55,076 economically disadvantaged students.

A nine-member elected board of education governs the School System and appoints the director of schools who manages the School System's day-to-day operations and administration. The School System's amended operating budget for 2013–2014 totaled \$746,420,300, and its capital budget totaled \$95,042,000. **Exhibit ES-1** provides a profile of the School System for 2012-2013 and 2013-2014.

**Exhibit ES-1  
School System Profile**

	2012-2013	2013-2014
<b>Governance and Enrollment:</b>		
Number of Board Members	9	9
Student Enrollment	81,033	82,863
Number of Schools	153	157
<b>Student Ethnicity:</b>		
African American	45.8%	45.0%
Anglo	35.3%	32.0%
Hispanic	16.6%	19.0%
Other	2.3%	4.0%
<b>Economically Disadvantaged Students</b>		
	69%	66%
<b>Certificated Staff:</b>		
Certificated Teachers	5,333	5,167
Principals/Assistant Principals	285	289
Coordinators Directors	94	87
Guidance Counselors	246	241
Coaches/Specialists	344	310
Librarians	132	131
Social Workers/Psychologists	105	101
<b>Financial Information:</b>		
General Purpose Fund	\$720,420,300	\$746,420,300
Debt Service Fund	50,073,400	69,624,400
Nutritional Services Fund	38,748,800	42,058,900
Federal, State, and Local Grants	96,272,000	84,598,000
School Self-Insurance Fund	1,554,400	1,326,000
Schools Central Storeroom	612,500	650,000
Professional Employee Insurance Fund	90,000,200	104,073,300
<b>Total Budgeted Expenditures</b>	<b>\$997,681,600</b>	<b>\$1,048,750,900</b>
<b>Total Capital Budget</b>		
	\$97,000,000	\$95,042,000
<b>General Purpose Expenditures per Pupil</b>		
	<b>\$8,890</b>	<b>\$9,008</b>
<b>Total Expenditures Pupil</b>		
	<b>\$12,312</b>	<b>\$12,656</b>

Source: Metropolitan Nashville Public Schools 2012-13 Facts and 2013-14 Facts and 2013-2014 Budget Book.

## SCOPE AND METHODOLOGY

The following areas were reviewed in accordance with the scope of work:

1. district organization and management;
2. educational service delivery;
3. impact of charter schools on Metropolitan Nashville Public Schools;
4. human capital;
5. financial management;
6. facilities;
7. nutrition services;
8. transportation;
9. safety and security;
10. technology management;
11. analysis of educational spending; and
12. performance accountability systems.

Upon contract execution, the review team prepared and presented the School System with a comprehensive list of requested data by operational area. Review team members analyzed the data prior to the onsite visit, which began the week of January 27, 2014. The first onsite activity was a visioning session held with the director of schools and the School System executive leadership team. The purpose of the visioning session was to obtain an understanding of the School System's strengths, weaknesses, opportunities, and threats. Information from the visioning session, combined with results of our preliminary data analysis, provided the context for conducting interviews and focus groups with board members, administrators, and other school employees.

The review team conducted interviews, collected data, and implemented verification/validation activities at School System facilities during an eight-week period from January 27, 2014 through March 20, 2014. We implemented a plan to visit approximately 40 percent of the schools including a sample of charter schools. School visits were a critical component of our project approach because they allowed team members to see first-hand how the School System's administrative and operational functions support campus needs.

During school visits, review team members used data collection, observation, and interview guides. School visits provided an opportunity for the review team to identify potential issues impacting management and operations that may not have been evident in results from surveys, focus groups, community meetings, and data analysis. The review team collected data for this project through multiple sources, including:

- interviews with the director of schools, executive leadership team, division directors, and key staff;
- interviews with board members;
- individual and group interviews with program directors, coordinators, teachers, and staff;

- online surveys of principals, teachers, central administration, school resource officers and other Metropolitan Nashville Public Schools' staff;
- visits to a sample of 60 facilities and interviews with administrators and staff;
- a community forum;
- peer district surveys; and
- document review.

The review team used survey results to provide context and perspective to our analyses and in some instances to support and corroborate observations. Peer district survey responses served as benchmarks against which to measure and compare School System operations.

The review team conducted a community open house meeting on February 18, 2014 to provide the public with an opportunity to offer their opinions on how the School System was doing. A centralized location was selected to accommodate the School System's geographic area. Team leaders were present to personally address questions about specific focus areas of the review.

During our review, we also examined exemplary practices and accomplishments. While the primary focus of the review was to identify opportunities for improvement, we also sought out and highlighted areas where the district is doing well. Areas where the district is performing exceptionally well are documented in the report as accomplishments.

The review team identified best practices for each of the areas assessed. During our evaluation, we determined whether the operation under review was meeting or not meeting the best practice standard. Unmet best practices became the driver of many of the observations in the report.

The following sections provide an overview of the key statistics, observations, and recommendations for each area of the School System reviewed during the engagement.

## OVERVIEW BY CHAPTER

### ***Chapter 1 - District Organization and Management***

Effective organization and management of a school system requires cooperation and communication between elected members of the board, the superintendent and staff, and the governmental entity responsible for providing funding support. The evaluation of the organization and management of the School System involved the following functional areas:

- governance;
- planning;
- district management;
- school management;
- performance accountability systems;

- communication; and
- community involvement.

The review team identified 33 best practices against which to evaluate the organization and management of the School System. **Exhibit ES-2** provides an overview of our evaluation of whether such best practices were met as well as other statistics.

**Exhibit ES-2**  
**District Organization and Management Summary**

Number of Best Practices	Best Practices Met	Best Practices Not Met	Percent Met	Number of Accomplishments	Number of Observations	Number of Recommendations	Five-year Savings/ (Investment) based on Recommendations
33	23	9	72%	12	20	22	\$4,959,200

Some of the key highlights in the District Organization and Management chapter include the following:

- The School System is directed by a skilled leader who is well respected by the board and stakeholders within and outside the School System. In addition, the School System has adopted a best-in-class “hands-off” governance model in which the board sets broad policy parameters, allows the director of schools to freely operate within those parameters, and holds the director of schools accountable for results.
- A broad range of comprehensive academic and social support programs administered by the Family and Community Partnerships Department enable students and families to overcome personal challenges, thereby enhancing student achievement and personal success.
- The School System has an opportunity to reduce school administrative costs by periodically evaluating its assistant principal staffing allocations.
- Completing the design of a performance dashboard would enable the school board to effectively monitor initiatives to improve student achievement and operational performance included in Education 2018: Excellence for Every Student, the School System’s five-year strategic plan.
- The School System’s internal communications plan would be more effective if it included strategies and tactics to communicate key messages, initiatives, and directives from executive leadership team meetings to employees throughout the system.
- Adopting a system-wide coupon book sale fundraiser could provide \$1,000,000 in additional revenue on an annual basis that could be used on projects targeted toward improving student academic performance.

## Chapter 2 - Educational Service Delivery

The School System serves students from pre-school through Grade 12 in a variety of grade configurations and offers a variety of academic programs plus a large number of extracurricular and athletic programs. Twenty traditional schools—seven at the elementary level, eight at the middle level, and five at the high school level—also have magnet school programs. Academic program offerings include multiple Advanced Placement courses and an International Baccalaureate Programme; ninth grade and theme-based academies at all 12 zoned high schools; and charter, magnet, specialty, and optional enrollment schools at all levels.

The review team identified 18 best practices against which to evaluate educational service delivery. **Exhibit ES-3** provides an overview of our evaluation of whether such best practices were met as well as other statistics.

**Exhibit ES-3  
Educational Service Delivery Summary**

Number of Best Practices	Best Practices Met	Best Practices Not Met	Percent Met	Number of Accomplishments	Number of Observations	Number of Recommendations	Five-year Savings/ (Investment) based on Recommendations
18	10	8	56%	10	9	9	(\$760,671)

Some of the key highlights in the Educational Service Delivery Chapter include the following:

- The School System is expanding the capacity of its Pre-K program in 2014-2015 from 2,516 to 2,838 students by repurposing two PreK-4 campuses to Model Pre-K Learning Centers and adding capacity through a partnership with an existing community center that will focus on early math skills, language development, multicultural development, and intense staff development programming.
- The School System has developed an innovative process for determining the extent to which each campus is providing a high-quality education for students.
- The Career Technical Education program offers courses in a wide range of high-skill/wage/demand occupations and is supported by extensive business participation and university partnerships.
- The School System has begun a number of research-based initiatives designed to improve learning opportunities for students but has not yet realized the desired levels of success.
- Implementing proven behavior management strategies will improve overall discipline. It will also reduce racial disparities in discipline and in disproportional assignments to alternative learning centers.
- Continued development and improvement of support structure, staff, curriculum, and instructional strategies will increase the language proficiency and academic preparedness of English language learners.

### Chapter 3 - Impact of Charter Schools on Metropolitan Nashville Public Schools

Charter schools were conceived in the early 1990s as a new type of public school that would be free from many laws and administrative mandates imposed on traditional public schools. They were conceived as incubators for innovation, benefitting the public education enterprise as a whole through their example as well as benefitting the students they served. They are seen by some as a means to respond to the difficulties faced by low-performing public schools, particularly those in urban areas. They have more flexibility to respond to the particular needs of struggling students yet still be held accountable for performance at expected levels.

The review team did not identify any charter school best practices since the purpose of this chapter was primarily informational. **Exhibit ES-4** provides an overview of other chapter details.

**Exhibit ES-4**  
**Impact of Charter Schools on Metropolitan Nashville Public Schools Summary**

Number of Best Practices	Best Practices Met	Best Practices Not Met	Percent Met	Number of Accomplishments	Number of Observations	Number of Recommendations	Five-year Savings/ (Investment) based on Recommendations
0	N/A	N/A	N/A	0	4	5	\$0

Some of the key highlights in the Impact of Charter Schools chapter include the following:

- Charter school enrollment has grown dramatically since the first charter was opened in 2003.
- High performing charter schools offer an opportunity for the School System to improve the academic performance of its students. Therefore, there is a demand in the community to expand alternatives to persistently low performing traditional schools.
- Financial resources must be repurposed when a student transfers from the School System to a charter school.
- The School System requires a means of capturing and recovering indirect and administrative costs associated with charter schools.
- Better communication, coordination of services, and information sharing would enable the School System and charter schools to optimize educational resources.

### Chapter 4 - Human Capital

The School System must offer competitive compensation, benefits, and career path opportunities to attract and retain the best employees. School systems must also have written disciplinary procedures in place when employees do not meet expectations or follow established policies and procedures. Accordingly, the purpose of the human capital function is to provide services that support recruiting, employing, retaining, and developing faculty and staff.

The review team identified 17 best practices against which to evaluate the human capital function. **Exhibit ES-5** provides an overview of our evaluation of whether such best practices were met as well as other statistics.

**Exhibit ES-5  
Human Capital Summary**

Number of Best Practices	Best Practices Met	Best Practices Not Met	Percent Met	Number of Accomplishments	Number of Observations	Number of Recommendations	Five-year Savings/ (Investment) based on Recommendations
17	12	5	71%	3	5	12	\$0

Some of the key highlights in the Human Capital chapter include the following:

- The School System has many innovative practices to help attract and recruit qualified staff. Additionally, they maintain a pool of qualified applicants to facilitate the hiring process when a vacancy occurs.
- The School System offers their educators higher salaries than the surrounding school systems. When measured against surrounding school systems in 13 teacher and academic salary categories tracked by the state, the School System ranks among the top ten school systems in 9 of the 13 categories.
- The School System's Human Capital Services Department is not structured and functioning optimally to support human capital needs and should align employee activities within the department to report to the appropriate function leader.
- The School System has experienced high teacher turnover rates over the past three school years and should develop a plan to stabilize teacher retention.
- The division of employee benefit plans between Metropolitan Nashville Government for non-certificated (support) staff and the School System for certificated (teaching) staff causes higher cost to the School System and creates an atmosphere of inequity among employees.

**Chapter 5 - Financial Management**

Sound financial management enables the School System to meet the challenge of satisfying the dual demands of educating the community's children while balancing financial resources. The primary source of funding is through the Tennessee Department of Education. The Tennessee Department of Education appropriates funds for K-12 education through the Basic Education Program funding formula, which provides a per student allotment to the School System. The funds generated by the Basic Education Program are what the state has defined as sufficient to provide a basic level of education for Tennessee students. This basic level of funding includes both a state and local share of the Basic Education Program.

The total 2013-2014 revenue budget is projected to be \$734,420,300, which includes \$12,000,000 in fund balance. Of the \$734,420,300, excluding fund balance, property tax revenues of \$285,203,000 comprise nearly 39 percent followed by state and other government revenues of \$256,191,700, which comprises 35 percent. Basic Education Program revenue is \$252,545,000 for 2013-2014. Local option sales taxes for 2013-2014 are projected to be nearly 25 percent of the revenue budget, or \$181,737,500.

The review team identified 22 best practices against which to evaluate the financial management of the School System. **Exhibit ES-6** provides an overview of our evaluation of whether such best practices were met as well as other statistics.

**Exhibit ES-6  
Financial Management Summary**

Number of Best Practices	Best Practices Met	Best Practices Not Met	Percent Met	Number of Accomplishments	Number of Observations	Number of Recommendations	Five-year Savings/ (Investment) based on Recommendations
22	16	6	72%	2	9	10	\$25,000

Some of the key highlights in the Financial Management chapter include the following:

- The School System's use of Metropolitan Nashville Government's online eBid system is an effective and profitable means of selling surplus property.
- For the past five years, the School System has received the Association of School Business Officials International Meritorious Budget Award for excellence in budget presentation.
- Risk-based audit approaches would optimize internal school fund audit resources and schedules while adding audit outcomes to principal evaluations would enhance the value and importance of school fund audits.
- Prepaid business credit cards offer a more efficient means of distributing Basic Education Program funds to teachers to purchase supplies.
- Configuring the Web Requisition system for use by charter schools would enhance their procurement process by enabling them to initiate electronic purchase orders.

**Chapter 6 - Facilities**

Effective facilities use and management processes consider the educational program needs, type, age, and configuration of owned, leased, and operated facilities. Effective processes enable school districts to plan, finance, and implement changes.

The School System maintains 2,000 acres and 200 buildings with more than 14,000,000 square feet of indoor space, including more than 5,000 classrooms. The value of land, buildings, equipment, and improvements total more than \$779,000,000. During 2013–2014, the School System's 157 campuses:

- elementary (grades PK-4) – 73;
- middle (grades 5-8) – 33;
- high (grades 9-12) – 25;
- alternative – 4;
- exceptional education – 4; and
- charter schools – 18.

The review team identified 24 best practices against which to evaluate the facilities management function of the School System. **Exhibit ES-7** provides an overview of our evaluation of whether such best practices were met as well as other statistics.

**Exhibit ES-7  
Facilities Summary**

Number of Best Practices	Best Practices Met	Best Practices Not Met	Percent Met	Number of Accomplishments	Number of Observations	Number of Recommendations	Five-year Savings/ (Investment) based on Recommendations
24	14	10	58%	3	10	11	*\$3,439,292 **\$28,784,712

\*Based on recommendations.

\*\* With outsourcing in year two.

Some of the key highlights in the Facilities Management chapter include the following:

- A comprehensive facility master plan and a deferred maintenance plan will provide strategic direction for prioritizing and funding future projects.
- The implementation of a comprehensive plan to optimize facility utilization in all clusters will reduce the number of overcrowded and underutilized schools.
- The absence of a staff allocation model contributes to ineffective distribution of workloads and lower productivity.
- Maintenance can further improve efficiency and productivity by moving to a five geographic zone approach to deploy staff to work sites.
- Hiring an in-house energy manager to coordinate energy management programs and continuously evaluate energy use would help to reduce costs.
- By implementing an energy conservation program, the School System can potentially save an estimated \$973,818 annually.
- Estimates from a national facilities management outsource provider suggest that the School System could potentially save an average of \$1,698,582 annually, beginning in 2016-2017, if the department was outsourced.
- Estimates from a national facilities management outsource provider suggest that the School System could potentially save an average of \$5,520,395 annually, beginning in 2016-2017, if the energy management program was outsourced.

**Chapter 7 - Nutrition Services**

School district food service operations, also known as Child Nutrition Services, must comply with a variety of federal and state regulations and local board policy. The United States Congress directed the National School Lunch Program in 1946 to “safeguard the health and well-being of the nation’s children and to encourage the domestic consumption of nutritional agricultural products.” Districts that participate in the National School Lunch Program and School Breakfast Program must serve meals that meet federal guidelines for nutritional value and offer free or reduced-price meals to eligible students.

The School System’s Nutrition Services Department serves breakfast and lunch meals to more than 82,000 students. In 2012-13, the program served over 4,200,000 breakfasts and almost 8,400,000 lunches to students at these schools. Approximately 75 percent of students enrolled in the schools are eligible to receive free or reduced-priced breakfast and lunch meals through federal reimbursements from the United States Department of Agriculture Child Nutrition Program.

The review team identified eight best practices against which to evaluate the food services function of the School System. **Exhibit ES-7** provides an overview of our evaluation of whether such best practices were met as well as other statistics.

**Exhibit ES-7  
Nutrition Services Summary**

Number of Best Practices	Best Practices Met	Best Practices Not Met	Percent Met	Number of Accomplishments	Number of Observations	Number of Recommendations	Five-year Savings/ (Investment) based on Recommendations
8	3	5	38%	5	6	12	*\$1,947,965 **\$8,955,461

*\*Based on recommendations.*

*\*\* With outsourcing in year two.*

Some of the key highlights in the Nutrition Services chapter include the following:

- With a fund balance of \$14,353,519, or 38 percent of annual operating expenditures, the Nutrition Services Department has sufficient fund reserves for continued self-sustained operations.
- The School System's food costs, as a percentage of total revenue, are well below peer districts.
- The director of Nutrition Services and nutrition education and training coordinator have worked in cooperation with local advocacy groups, such as the Alignment Nashville Nutrition Committee, to serve healthier and more nutritious meals in the School System.
- Nutrition Services' current payroll costs are 52 percent of revenues and therefore should reduce payroll costs by 10 percentage points of 2012-2013 departmental total payroll expenses over the next five years. By reducing labor costs, Nutrition Services has an opportunity to achieve \$389,593 per year in annual cost savings, beginning in 2015-2016.
- Estimates from a national food service outsource provider suggest that the School System could potentially save an average of \$2,141,467 annually, beginning in 2016-2017, if food service operations were outsourced.

### **Chapter 8 - Transportation**

The School System’s Transportation Department operates its own fleet of school buses providing transportation to over 51,000 eligible pre-kindergarten through twelfth grade students daily. There are a total of 682 school buses in the fleet of which 653 are active. Of the 653 active school buses there are 202 buses that transport students with special needs. The School System also uses the services of the Metropolitan Transportation Authority for the transportation of students in systemwide programs including magnet schools. The Transportation Department is instrumental in the School System’s vision to “build and sustain effective and efficient systems to support finances, operations, and the academic and personal

growth of students”. The Transportation Department fulfills this vision by providing safe, on-time, and efficient services busing students to and from school as well as athletic and co-curricular trips.

The review team identified 16 best practices against which to evaluate the transportation function of the School System. **Exhibit ES-8** provides an overview of our evaluation of whether such best practices were met as well as other statistics.

**Exhibit ES-8  
Transportation Summary**

Number of Best Practices	Best Practices Met	Best Practices Not Met	Percent Met	Number of Accomplishments	Number of Observations	Number of Recommendations	Five-year Savings/ (Investment) based on Recommendations
16	9	7	56%	7	13	16	*(\$14,543,404) **\$16,389,200

*\*Based on recommendations.*

*\*\* With outsourcing in year two.*

Some of the key highlights in the Transportation chapter include the following:

- The Transportation Dispatch Center provides excellent customer service and routing support information.
- Changes to maintenance practices have had a positive and substantial impact on the department’s ability to provide on-time service.
- Transportation and maintenance operations are understaffed.
- Improvements in information technology are necessary to increase the efficiency and effectiveness of fleet maintenance services.
- A significant backlog of fleet replacement has accumulated and must be addressed.
- Exceptional education transportation costs are significantly above norms due to the legal requirements of an ongoing consent decree.
- Estimates from a national student transportation outsource provider suggest that the School System could potentially save \$4,097,300 annually and avoid investment costs of \$3,200,000 on an annual basis associated with school bus and white fleet replacement over the next five years if outsourcing student transportation is implemented.

**Chapter 9 - Safety and Security**

The School System must provide a safe and secure learning environment for students to excel academically. Components of effective safety security programs include policies, procedures, and programs to address crisis contingencies, student discipline, and facility safety. The mission of the School System’s Office of School Security is to provide professional services that support and promote a safe and secure educational environment.

The School System has 26 school security staff including a director, operations manager, field manager, 2 lead security officers, 17 security officers, 2 dispatchers, 1 account clerk, and 1 secretary. In addition to the school security staff and school resource officers, there are 107 campus support staff (campus supervisors) to assist campus administration. There are 98 campus supervisors assigned to the middle and high schools, 5 assigned to three alternative learning centers, and 4 assigned to academies.

The review team identified five best practices against which to evaluate the safety and security function of the School System. **Exhibit ES-9** provides an overview of our evaluation of whether such best practices were met as well as other statistics.

**Exhibit ES-9  
Safety and Security Summary**

Number of Best Practices	Best Practices Met	Best Practices Not Met	Percent Met	Number of Accomplishments	Number of Observations	Number of Recommendations	Five-year Savings/ (Investment) based on Recommendations
5	1	4	20%	1	12	14	\$5,395,895

The Safety and Security chapter was communicated to the School System’s executive management in a confidential report version.

**Chapter 10 - Technology Management**

The technology management function affects the operational, instructional, and financial functions of the School System. Technology management consists of planning and budgeting, technical infrastructures, application support, purchasing, and inventory control. To manage technology typically requires staff dedicated to administrative and instructional technology responsibilities.

The School System’s administrative technology is handled by the Technology and Information Services Department and instructional technology is handled by the Learning Technology and Library Services Department.

The review team identified 10 best practices against which to evaluate the technology function of the School System. **Exhibit ES-10** provides an overview of our evaluation of whether such best practices were met as well as other statistics.

**Exhibit ES-10  
Technology Management Summary**

Number of Best Practices	Best Practices Met	Best Practices Not Met	Percent Met	Number of Accomplishments	Number of Observations	Number of Recommendations	Five-year Savings/ (Investment) based on Recommendations
10	3	7	30%	3	8	16	(\$735,740)

Some of the key highlights in the Technology Management chapter include the following:

- The School System has a comprehensive data warehouse that provides pertinent student information that is consistent and accessible throughout the School System.
- The School System has a state-of-the-art professional development facility to provide a convenient and central location for instructional technology training.
- A methodology or formalized process would help determine the technical staff required to provide adequate and equitable support to the schools.
- A long-range technology plan that incorporates a hardware replacement strategy could more effectively drive district wide technology initiatives and technology infrastructure upgrades.
- Appointment of an information security officer would provide the expertise required to develop and manage technology security and risk strategies.

### ***Chapter 11 - Analysis of Educational Spending***

The objectives of this chapter were to use the School System's expenditure data from 2012-2013 to analyze the School System's total and school-level expenditures. Since expenditure analysis was the objective of this chapter, no best practices, accomplishment, observations, recommendations, or fiscal impacts were noted. Instead, the chapter is designed to answer questions regarding educational spending. The following list provides examples of some of the questions and is not all-inclusive.

1. How much money does the School System spend and for what purposes?
2. For what activities and purposes are direct and indirect expenditures being spent?
3. How much is spent in the classroom per student and in total for elementary, middle, and high schools?
4. What is the cost per student for each cluster?
5. Do schools with higher percentages of minority students spend more, less, or the same per student as schools with higher majority student populations?

The following highlights of the chapter answer specific questions about how the School System spends its resources.

- Students, employees, and facilities are the chief drivers of educational spending.
- Sixty-two cents of each dollar the School System spends is for general purpose spending.
- Seventy-two cents of every general purpose dollar goes towards instruction.
- Sixty-five cents of every general purpose dollar is spent directly at the school level.
- The School System spends a total of \$14,747 per student overall and spends \$5,870 per student directly at the school level, not including specialty schools.
- The Maplewood cluster spends the most per student while the Cane Ridge cluster spends the least.
- Schools with higher percentages of students eligible for free and reduced lunch tend to spend more per student.

- Four of the five clusters with the highest cost per student have a majority of African-American students. One of the five has a majority of Caucasian students.
- The School System tends to invest more General Fund Purpose dollars in the poorest and lowest academically performing schools.

### Chapter 12 - Performance Accountability Systems

Performance accountability is measuring and reporting the results of educational programs and administrative/operational functions, and support services based on the School System’s clearly stated goals, objectives, and measurable outcomes. The board and director of schools can use these measurable outcomes to develop, monitor, and enforce expectations for staff performance. An effective performance accountability system integrates planning and budgeting, along with reviewing, evaluating and reporting results used to improve the performance of programs, operations, and cost efficiency.

The review team identified two best practices against which to evaluate performance accountability systems within the School System. **Exhibit ES-11** provides an overview of our evaluation of whether such best practices were met as well as other statistics.

**Exhibit ES-11  
Performance Accountability Systems Summary**

Number of Best Practices	Best Practices Met	Best Practices Not Met	Percent Met	Number of Accomplishments	Number of Observations	Number of Recommendations	Five-year Savings/ (Investment) based on Recommendations
2	0	2	0%	0	2	2	\$0

Some of the key highlights in the Performance Accountability Systems Chapter include the following:

- Performance measurement promotes accountability and provides a conceptual framework for monitoring and managing School System operations.
- The School System is implementing a detailed educational and academic performance accountability system tied to its five-year strategic plan, Education 2018: Excellence for Every Student.
- The School System’s performance accountability system is designed around its “Coherence Framework,” which is aligned with student and system wide performance goals, objectives, and strategies.
- While the School System has planned a comprehensive performance accountability framework, it needs to do a better job of evaluating educational programs.
- The School System is a member of the Council of Great City Schools and has access to some of the Council’s key performance indicators to analyze and manage operations.
- The School System should develop a formal performance accountability system to better manage and oversee administrative and operational functions on a monthly basis.

**Summary of Fiscal Impacts**

- The review team identified a potential net investment of **(\$272,463)** over the next five years (2015-2016 through 2019-2020) if the recommendations in this report are implemented. This amount consists of **(\$18,959,021)** of investments and **\$18,686,558** of savings.
- If Nutrition, Transportation, Facilities, and Energy Management operations are outsourced in year two, the potential savings for these functions only are estimated to be **\$54,129,373**.

Exhibit ES-12 provides a summary of potential net savings over the next five years.

**Exhibit ES-12**  
**Fiscal Impact Summary**

Chapter	Description	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
1- District Organization and Management	Savings	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$5,000,000	\$0
	Costs	(\$8,160)	(\$8,160)	(\$8,160)	(\$8,160)	(\$8,160)	(\$40,800)	\$0
	Net	\$991,840	\$991,840	\$991,840	\$991,840	\$991,840	\$4,959,200	\$0
2- Educational Service Delivery	Savings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Costs	(\$165,115)	(\$154,835)	(\$154,927)	(\$142,897)	(\$142,897)	(\$760,671)	\$0
	Net	(\$165,115)	(\$154,835)	(\$154,927)	(\$142,897)	(\$142,897)	(\$760,671)	\$0
3-Impact of Charter Schools on MNPS	Savings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Net	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4-Human Capital	Savings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Net	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5-Financial Management	Savings	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000	\$0
	Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Net	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000	\$0
6-Facilities	Savings	\$0	\$973,818	\$973,818	\$973,818	\$973,818	\$3,895,272	\$0
	Costs	(\$91,196)	(\$91,196)	(\$91,196)	(\$91,196)	(\$91,196)	(\$455,980)	(\$200,000)
	Net	(\$91,196)	\$882,622	\$882,622	\$882,622	\$882,622	\$3,439,292	(\$200,000)
	With Outsourcing Maintenance and Energy Management in Year 2	(\$91,196)	\$7,218,977	\$7,218,977	\$7,218,977	\$7,218,977	\$28,784,712	(\$200,000)
7-Nutritional Services	Savings	\$389,593	\$389,593	\$389,593	\$389,593	\$389,593	\$1,947,965	\$0
	Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Net	\$389,593	\$389,593	\$389,593	\$389,593	\$389,593	\$1,947,965	\$0
	With Outsourcing in Year 2	\$389,593	\$2,141,467	\$2,141,467	\$2,141,467	\$2,141,467	\$8,955,461	\$0
8-Transportation	Savings	\$0	\$0	\$730,032	\$730,032	\$730,032	\$2,190,096	\$0
	Costs	(\$3,188,100)	(\$3,221,100)	(\$3,344,100)	(\$3,467,100)	(\$3,513,100)	(\$16,733,500)	(\$105,000)
	Net	(\$3,188,100)	(\$3,221,100)	(\$2,614,068)	(\$2,737,068)	(\$2,783,068)	(\$14,543,404)	(\$105,000)
	With Outsourcing in Year 2	\$0	\$4,097,300	\$4,097,300	\$4,097,300	\$4,097,300	\$16,389,200	\$0
9-Safety and Security	Savings	\$1,107,645	\$1,107,645	\$1,107,645	\$1,107,645	\$1,107,645	\$5,538,225	\$0
	Costs	(\$28,466)	(\$28,466)	(\$28,466)	(\$28,466)	(\$28,466)	(\$142,330)	\$0
	Net	\$1,079,179	\$1,079,179	\$1,079,179	\$1,079,179	\$1,079,179	\$5,395,895	\$0

**Exhibit ES-12**  
**Fiscal Impact Summary (Cont'd)**

Chapter	Description	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
10-Technology Management	Savings	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$90,000	\$0
	Costs	(\$165,148)	(\$165,148)	(\$165,148)	(\$165,148)	(\$165,148)	(\$825,740)	\$0
	Net	(\$147,148)	(\$147,148)	(\$147,148)	(\$147,148)	(\$147,148)	(\$735,740)	\$0
11-Analysis of Educational Spending	Savings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Net	\$0	\$0	\$0	\$0	\$0	\$0	\$0
12- Performance Accountability Systems	Savings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Net	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Grand Total</b>	Savings	\$2,520,238	\$3,494,056	\$4,224,088	\$4,224,088	\$4,224,088	\$18,686,558	\$0
	Costs	(\$3,646,185)	(\$3,668,905)	(\$3,791,997)	(\$3,902,967)	(\$3,948,967)	(\$18,959,021)	(\$305,000)
	<b>Net Based on Recommendations</b>	<b>(\$1,125,947)</b>	<b>(\$174,849)</b>	<b>\$432,091</b>	<b>\$321,121</b>	<b>\$275,121</b>	<b>(\$272,463)</b>	<b>(\$305,000)</b>
	With Outsourcing Nutrition, in Year 2	\$389,593	\$2,141,467	\$2,141,467	\$2,141,467	\$2,141,467	\$8,955,461	\$0
	With Outsourcing Transportation in Year 2	\$0	\$4,097,300	\$4,097,300	\$4,097,300	\$4,097,300	\$16,389,200	\$0
	With Outsourcing Facilities and Energy Management in Year 2	(\$91,196)	\$7,218,977	\$7,218,977	\$7,218,977	\$7,218,977	\$28,784,712	(\$200,000)

# CHAPTER 1 – DISTRICT ORGANIZATION AND MANAGEMENT

## BACKGROUND

Effective organization and management of a school system requires cooperation and communication between elected members of the board, the superintendent (or the director of schools) and staff, and the governmental entity responsible for providing funding support. The board's role is to set goals and objectives for the school system in both instructional and operational areas, establish governance policies, approve plans to implement those policies, and work with the governmental entity to provide the funding necessary to implement those plans. The staff is responsible for managing day-to-day implementation of the plans approved by the board, and recommending the appropriate modifications to ensure the system operates effectively. The superintendent, as the chief executive officer of the system, recommends staffing levels, programs, and the amount of resources necessary to operate the system and accomplish the board's goals and objectives. The governmental entity is responsible for adopting the budget approved by the board and approving any amendments resulting in changes to the originally adopted budget.

To effectively evaluate the organization and management of a school system, we review the following functional areas:

- governance;
- planning;
- district management;
- school management;
- communications; and
- community involvement.

The interrelationship between these six functional areas contributes to the effectiveness of the overall organization and management of any school system.

Metropolitan Nashville Public Schools (the School System), officially formed in 1963 with the consolidation of the City of Nashville and Davidson County Schools, is one of 65 departments in the Metropolitan Nashville Government. The Metropolitan Nashville Council, which consists of 40 council members and the mayor of Nashville, performs the primary governance and administrative functions for the Metropolitan Nashville Government. The Metropolitan Nashville Council is

### CHAPTER HIGHLIGHTS

- The director of schools is a skilled leader, who is well-respected by the board and stakeholders within and outside the School System.
- A broad range of comprehensive academic and social support programs administered by the Family and Community Partnerships Department enable students and families to overcome personal challenges, thereby enhancing student achievement and personal success.
- The School System has an opportunity to reduce school administrative costs by periodically evaluating its assistant principal staffing allocations.
- Completing the design of a performance dashboard would enable the school board to effectively monitor initiatives to improve student achievement and operational performance included in Education 2018: Excellence for Every Student, the School System's five-year strategic plan.
- The School System's internal communications plan would be more effective if it included strategies and tactics to communicate key messages, initiatives, and directives from executive leadership team meetings to employees throughout the system.
- Adopting a systemwide coupon book sale fundraiser could provide \$1,000,000 in additional revenue on an annual basis that could be used on projects targeted toward improving student academic performance.

the legislative authority that authorizes and approves the School System’s operating and capital budgets, as the board of education (the board) has no taxing authority.

The School System encompasses a 533 square mile area and is the second largest school system in the state of Tennessee, and the 42nd largest school system in the United States, with 82,863 students in 157 schools; 6,326 teachers and certified staff; and 3,795 support staff. The School System has an ethnically diverse student population, which is 45 percent African American; 32 percent Anglo; 19 percent Hispanic, and 4 percent Asian. Its student population also includes 22,291 English Learners and 55,076 economically disadvantaged students.

Article 9 of Part I– Charter of the Metropolitan Government of Nashville and Davidson County, Tennessee details the governance and administration of the School System within the Metropolitan Nashville Government structure. Accordingly, a nine-member elected board of education governs the School System and appoints the director of schools, who manages the day-to-day operation and administration. The School System’s Amended Operating Budget for 2013–2014 totaled \$746,420,300 for approximately 8,476 full-time equivalent positions, and its Capital Budget for 2013–2014 totaled \$95,042,000. **Exhibits 1-1** and **Exhibit 1-2** present the School System’s Amended Operating and Capital Budget, respectively, for 2013–2014.

**Exhibit 1-1**  
**Metropolitan Nashville Public Schools**  
**Amended Operating Budget for 2013–2014**

Budget Line Item	2013–2014 Amended Positions	2013–2014 Amended Budget
Administration	121.0	\$ 13,508,700
Leadership and Learning	7,140.9	526,877,200
Attendance and Social Services	95.0	6,859,000
Transportation	842.0	36,021,000
Operation of Plant	64.0	63,116,400
Maintenance of Buildings	208.5	18,636,000
Fixed Charges	-	39,897,100
Adult and Community Services	4.5	450,600
<b>Subtotal</b>	<b>8,475.9</b>	<b>\$ 705,366,000</b>
Operating Transfers to Charter Schools	-	39,454,500
Reimbursable Projects	-	1,599,800
<b>GRAND TOTAL</b>	<b>8,475.9</b>	<b>\$ 746,420,300</b>

Source: Metropolitan Nashville Public Schools Amended Operating Budget, 2013–2014.

**Exhibit 1-2**  
**Metropolitan Nashville Public Schools**  
**Capital Budget for 2013–2014**

Project	Estimated Cost
<b>SCHOOL ADDITIONS AND NEW BUILDINGS</b>	
Antioch Cluster New Elementary School (800)	\$16,899,000
Granbery Elementary School 12 CR Addition	3,079,000
Madison Middle School 12 CR Addition	3,105,000
Maxwell Elementary School 12 CR Addition	3,079,000
Shayne Elementary School 12 CR Addition	3,079,000
Waverly Belmont Elementary School Addition (600) and Renovation	8,500,000
<b>Sub Total</b>	<b>\$37,741,000</b>
<b>SCHOOL RENOVATIONS AND REPLACEMENTS</b>	
Goodlettsville Middle School Replacement (800)	\$20,176,000
Julia Green Elementary Site Improvements	275,000
McGavock High School Fire safety Improvements	750,000
<b>Sub Total</b>	<b>\$21,201,000</b>
<b>DISTRICTWIDE PROJECTS</b>	
ADA Compliance and Accommodations	\$1,000,000
Asbestos, Environment Abatement	1,000,000
Asphalt Paving	1,000,000
Bus Replacement	3,000,000
Casework, Furniture, and Lab Upgrades	1,000,000
Emergency Maintenance, Entry Vestibules	1,200,000
HVAC Upgrades and Replacements	5,400,000
Plumbing and Boiler Upgrades	2,500,000
Roof Repair and Replacement	3,000,000
Security Upgrades	5,000,000
Stadium, Track, and Lighting Upgrades	2,000,000
Technology	10,000,000
<b>Sub Total</b>	<b>\$36,100,000</b>
<b>GRAND TOTAL</b>	
	<b>\$95,042,000</b>

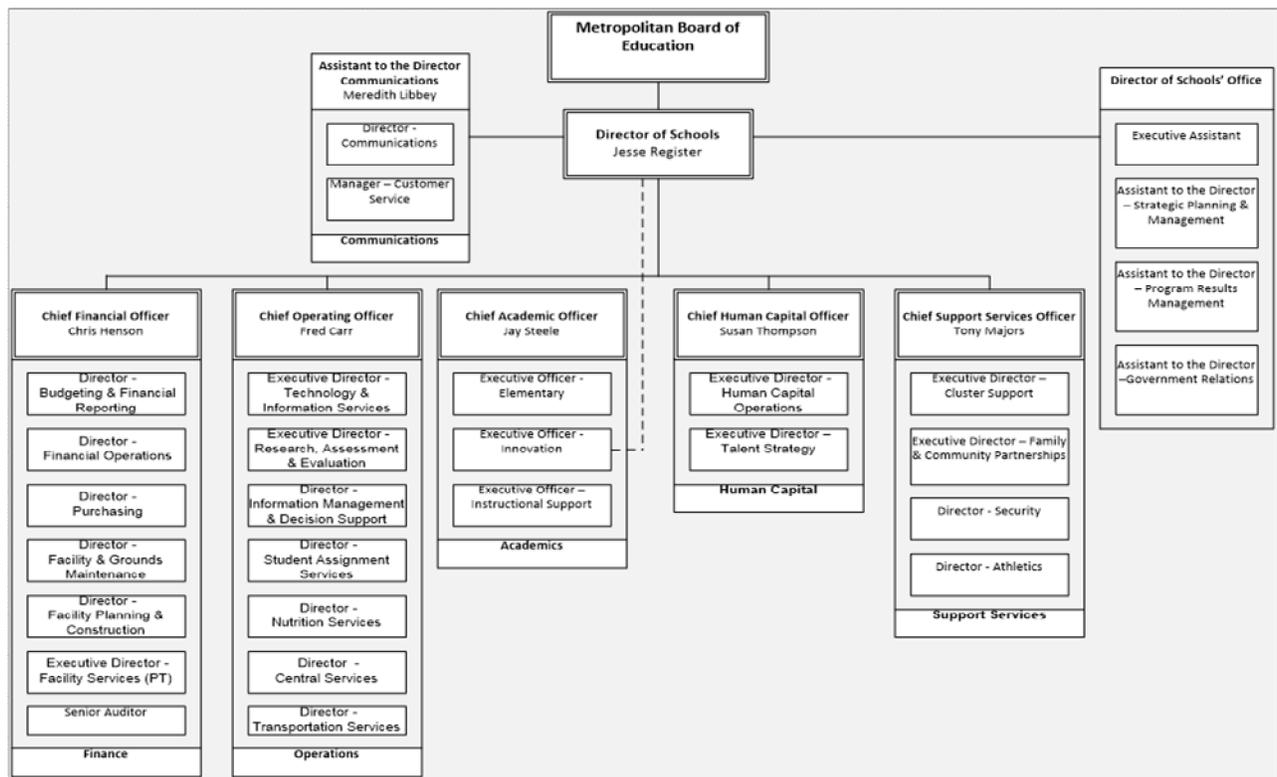
Source: Metropolitan Nashville Public Schools Capital Budget, 2013–2014.

Dr. Jesse Register, director of schools, leads the School System and manages its day-to-day operation and administration through an executive leadership team consisting of line executives and members of his staff serving as his assistants. Dr. Register's direct reports and assistants on his staff comprise the School System's executive leadership team. The central office is organized by functional area, while 73 elementary schools, 33 middle schools, 25 high schools, four alternative schools, four exceptional education schools, and 18 charter schools. The School System is organized into 12 contiguous clusters that represent specific school zones and related feeder patterns through which students matriculate from elementary school through high school. **Exhibit 1-3** presents the current organization for the School System.

In 2009, the School System was on the verge of state takeover because of low-performing schools, and had not met performance standards contemplated by the federal government’s No Child Left Behind Act of 2001 for six years. According to Education 2018: Excellence for Every Student, the School System’s strategic plan, an “organization of mistrust and a negative public perception” further compromised and challenged the School System, requiring the director to initiate an “innovative and aggressive” systemwide reform effort in May 2009 known as “Metropolitan Nashville Public Schools Achieves.” The Annenberg Institute for School Reform (Annenberg Institute) described Metropolitan Nashville Public Schools Achieves as “reforms developed collaboratively through nine ‘Transformational Leadership Groups’ consisting of central office administrators, principals, teachers, community leaders, and parents who were asked to review data, best practices, and research to develop reform proposals in eight specific areas.”

The School System qualified for a \$40,000,000 Race to the Top grant from the U. S. Department of Education, which is a contest created to encourage innovative reforms in state and local school system K-12 education. With this funding, the School System applied “significant support and resources to reform initiatives targeted to improve the system’s collaborative culture, and increase student achievement across all subgroups of students.”

**Exhibit 1-3**  
**Metropolitan Nashville Public Schools**  
**Current Organizational Structure**



Source: Director of Schools, last revised January 10, 2014.

Since 2009, the School System experienced success in a number of areas, including posting academic gains each year and changing the culture of the system by enhancing collaboration at all levels. To further enhance collaboration at the executive level, in January 2013, the director restructured the School System’s organization, modifying his span of control by reducing the number of his direct reports to five from 10, and reducing his cabinet to eight members. Since the director of schools assumed leadership of the School System and initiated its systemwide transformation through Metropolitan Nashville Public Schools Achieves, a number of consulting or policy–research organizations have reviewed and evaluated the School System’s initiatives, including the Annenberg Institute for School Reform at Brown University, the Tribal Group, and the Lynch School of Education at Boston College. These reviews primarily evaluated instructional delivery and student performance, but also included the reorganization of the central office, communication and collaboration throughout the School System, and changes to the culture to support reform initiatives. **Exhibit 1-4** presents a summary of the reviews and evaluations of reform initiatives conducted since the director of schools initiated the School System reform initiatives in May 2009.

**Exhibit 1-4**  
**Consulting/Policy-Research Organizations Evaluating Reform Initiatives**

Organization	Report Title	Date	Description
Annenberg Institute for School Reform at Brown University	MNPS Achieves – An Evaluation Report	December 2010	Report began a two and one-half year documentation of Metropolitan Nashville Public Schools Achieves, designed to capture reform as it was evolving. Provides a detailed description of reforms to date, identifies implications for the School System, and describes how the Annenberg Institute is continuing to monitor the reform effort as it deepens in the 2010-2011 school year. Key findings are related to the structure and function of Transformational Leadership Groups and changing the culture of the School System.
Annenberg Institute for School Reform at Brown University	MNPS Achieves Year 2 – An Evaluation Report	November 2011	Report focused on the oversight team consisting of nine Transformational Leadership Groups; collaborative culture and capacity building; and shared understanding of effective teaching and learning.
Annenberg Institute for School Reform at Brown University	MNPS Achieves Year 3 – An Evaluation Report	November 2012	Report documented preliminary findings from surveys of central office staff, building administrators, and Transformational Leadership Group members, as well as individual interviews and principal focus groups. Report outlined accomplishments, areas of progress and remaining need, and issues with reforms moving forward.
Lynch School of Education at Boston College	A Report on the Inspirational Schools Partnership with the Metropolitan Nashville Public Schools	August 2012	Report is an interim review of the Inspirational Schools Partnership of the Tribal Group, and is based on 19 interviews conducted with people influential in leading and implementing the Inspirational Schools Partnership strategy in the School System. Key findings are related to empowering educators to take greater ownership of school improvements and innovation, as well as the culture in the School System’s central office.

**Exhibit 1-4**  
**Consulting/Policy-Research Organizations Evaluating Reform Initiatives (Cont'd)**

Organization	Report Title	Date	Description
Tribal Group	A Report on the Progress and Next Steps for the Inspirational Schools Partnership	December 2012	Report provides findings from analyzing educational outcomes throughout the entire School System, as well as direct review work with 34 high-priority schools. The report also includes key findings from the report issued by the Lynch School of Education at Boston College. Two of the four main findings are related to central office support and school management and accountability.

*Source: Actual Reports from Annenberg Institute for School Reform, Lynch School of Education, and the Tribal Group provided by Metropolitan Internal Audit.*

Each of the reports included in **Exhibit 1-4** credited the School System's reform initiatives with positive changes in culture and school accountability, and marginal changes in communication and collaboration, which continue to be a work in progress.

## BEST PRACTICES

Best practices are methods, techniques, or tools that have consistently shown positive results, and can be replicated by other organizations as a standard way of executing work-related activities and processes to create and sustain high performing organizations. When comparing best practices, similarity of entities or organizations is not as critical as it is with benchmarking. In fact, many best practices transcend organizational characteristics.

McConnell Jones Lanier & Murphy LLP (the review team) identified 33 best practices against which to evaluate the organization and management of the School System. Of the best practices in this section, 24 were met and nine were not met. **Exhibit 1-5** provides a summary of these best practices. Best practices that the School System does not meet result in observations, which we discuss in the body of the chapter. However, all observations included in this chapter are not necessarily related to a specific best practice.

**Exhibit 1-5**  
**Summary of Best Practices - District Organization and Management**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
1.	<b>Governance.</b> The roles and responsibilities of the board and superintendent are clearly defined, and board members and the superintendent have policies to ensure that they have effective working relationships.	X		The board adopted the John Carver Policy Governance® model in 2003, which clearly defines the roles and responsibilities of the board and director of schools. <b>See Observation 1-A.</b>
2.	<b>Governance.</b> The board works collaboratively and effectively to fulfill their responsibilities for school system governance and oversight.		X	The board has a slight undercurrent of mistrust because a few of its members interfere in the day-to-day operations of the School System. <b>See Observation 1-B.</b>
3.	<b>Governance.</b> The board and school system leaders work effectively with each other and with educational partners, including schools, unions, state-level associations and parent groups.		X	The board and School System leaders work well together; however, there are board members who are concerned with the negative impact of charter schools on the School System's budget. Failure to meet this best practice did not result in an observation because the situation is politically-charged and the report has a section on the impact of charter schools on the School System.

**Exhibit 1-5**  
**Summary of Best Practices - District Organization and Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
4.	<b>Governance.</b> The board and superintendent have established written policies and routinely update those policies to ensure they are relevant and complete.	X		After adopting Policy Governance®, the board and director of schools implemented board policies related to Governance Process, Board/Director Relationship, Executive Expectations, and End Results for Children. <b>See Accomplishment 1-A.</b>
5.	<b>Governance.</b> The superintendent provides skillful leadership focusing, on providing a critical link between the school system and schools, and the school system and the community.	X		The director of schools is a leader who stabilized the School System, pointed it in the right direction, and earned the respect and trust of the board, staff, and community. <b>See Accomplishment 1-B and Accomplishment 1-E.</b>
6.	<b>Planning.</b> The school system has a multi-year strategic plan developed using a systematic planning process that engages relevant stakeholders.	X		The director of schools and his executive leadership team developed the system's five-year strategic plan, Education 2018: Excellence for Every Student with input from the board and stakeholders throughout the Nashville community to develop the mission, vision, and beliefs used to develop the plan. However, some board members reported they provided feedback for the School System's vision, mission, and beliefs in board work sessions rather than through a formal visioning process. <b>See Observation 1-F.</b>
7.	<b>Planning.</b> The strategic plan serves as a guide for the school system and its schools, specifying vision, mission, performance goals, objectives, and benchmarks and the policies to achieve each strategic objective.	X		The board, director of schools, and the executive leadership team use Education 2018: Excellence for Every Student as a roadmap to accomplish the goals for student and system performance included in the strategic plan. <b>See Accomplishment 1-C.</b>

**Exhibit 1-5**  
**Summary of Best Practices - District Organization and Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
8.	<b>Planning.</b> The school system links its financial plans and budgets to its annual priorities in the strategic plan and its goals and objectives; and focuses resources towards achieving those goals and objectives.	X		The director of schools, working with the board and executive leadership team establishes budget priorities linked to strategies to achieve goals and objectives included in the strategic plan. <b>See Accomplishment 1-C.</b>
9.	<b>Planning.</b> The strategic plan is communicated effectively, leads to understanding, support and action, and is evaluated for effectiveness.		X	The School System has not effectively communicated the strategic plan and related expectations internally. <b>See Observation 1-G.</b>
10.	<b>District Management.</b> The school system's organizational structure has clearly defined units and lines of authority that minimize administrative costs.	X		The School System's organization structure has clear lines of authority in a relatively flat organization that minimizes administrative costs. <b>See Accomplishment 1-D.</b>
11.	<b>District Management.</b> The school system's organizational structure is designed to support student achievement and district goals.	X		The director of schools restructured the School System's organization to support student achievement and enhance accountability. <b>See Accomplishment 1-D.</b>
12.	<b>District Management.</b> The school system's organizational structure is characterized by positive, collegial working relationships.		X	Communication among members of the executive team and between the central office and schools is a continuing challenge. <b>See Observation 1-H.</b>
13.	<b>District Management.</b> The School system periodically reviews its administrative staffing and makes changes to eliminate unnecessary positions and improve operating efficiency.	X		The director of schools and members of the executive leadership team continue to review administrative staffing each budget cycle as part of its process for monitoring the strategic plan. <b>See Observation 1-O, 1-P.</b>

**Exhibit 1-5**  
**Summary of Best Practices - District Organization and Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
14.	<b>School Management.</b> The school System has clearly assigned school principals the authority they need to manage their schools effectively while adhering to systemwide policies and procedures.		X	The School System is in the initial stages of implementing school autonomy, as the director of schools piloted 17 schools in 2013–2014 to begin phasing in school autonomy over three years. The majority of principals must still work through the Leadership and Learning Division in the central office to make certain decisions. <b>See Observation 1-M, 1-N.</b>
15.	<b>School Management.</b> The school system has a process that allows staff, parents, and community members at the campus level to be involved in school system decision-making.		X	The School System does not have a structured school-level process that allows the community their schools serve to participate in School System decision-making. Also, the director of schools has a Parent Advisory Council that meets every other month at the system level. <b>See Observation 1-L.</b>
16.	<b>School Management.</b> The school system holds school administrators accountable for their performance in achieving school, system, and state educational goals.	X		Through its lead principal network, the School System uses executive and network lead principals to mentor, coach, and evaluate school principals. <b>See Accomplishment 1-F.</b>
17.	<b>Communications.</b> An effective administrative infrastructure is in place to promote and support internal and external communication to stakeholders and constituents.	X		The Communications Department has an effective organizational structure that is appropriately staffed. Staff members understand their roles and responsibilities and are effective at communicating to stakeholders overall. <b>See Accomplishment 1-H.</b>
18.	<b>Communications.</b> A documented Communications plan exists to drive and ensure effective communication to both internal and external stakeholders.		X	While the Communications Department has developed a Communications plan, it lacks goals, objectives, and quantifiable measures. Additionally, no process is in place to evaluate the plan and obtain feedback from stakeholders. <b>See Accomplishment 1-H.</b>

**Exhibit 1-5**  
**Summary of Best Practices - District Organization and Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
19.	<b>Communications.</b> The school system has an extensive list of key stakeholders that represent a broad cross-section of parents, community/civic/business and political leaders that it can draw upon for stakeholder input when needed.	X		The Communications Department maintains a broad list of community stakeholders for the purpose of community outreach. This list was provided to the review team and utilized to obtain stakeholder input to evaluate the School System's and the department's constituency base.
20.	<b>Communications.</b> The school system consistently engages in effective two-way communications and strives to provide transparent information to stakeholders.	X		The Communications Department has documented evidence of a broad range of communications channels used to reach stakeholders. The Customer Service unit within the department also assists with ensuring stakeholders obtain needed information expeditiously and have a formalized vehicle for prompt problem resolution.
21.	<b>Communications.</b> Critical oral, written, and electronic communication is disseminated in the native language of non-English speaking parents when appropriate.	X		The Communications Department provides a wealth of information to stakeholders via the website, flyers, robo calls, and social media in multi languages.
22.	<b>Communications.</b> The school system has a procedure in place that it is in compliance with processing public information requests.	X		The Communications Department is responsible for responding to requests filed pursuant to the Tennessee Open Records Law and has a process to ensure compliance with the law. Thirty-three formal requests for information were received from August 2013 through January 2014 and all but one request was processed within the required timeframe.
23.	<b>Communications.</b> The school system has a crisis communication plan in place.	X		The Communications Department has a "stand alone" Crisis Management plan and crisis management protocols are also addressed in the department's 2013 Communications Guide.

**Exhibit 1-5**  
**Summary of Best Practices - District Organization and Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
24.	<b>Communications.</b> The school system regularly evaluates communication strategies and functions to ensure effectiveness.		X	The Communications Department has no formal process in place for evaluating existing communications strategies. <b>See Observation 1-Q.</b>
25.	<b>Communications.</b> The school system has a feedback mechanism in place to gauge stakeholder perceptions of communication effectiveness.		X	The Communications Department has no formal process in place for obtaining feedback from stakeholders. <b>See Observation 1-Q.</b>
26.	<b>Community Involvement.</b> The school system has an effective administrative infrastructure in place to promote and support effective parent and community involvement initiatives.	X		The Family and Community Partnerships Department has a comprehensive complement of community involvement programs.
27.	<b>Community Involvement.</b> Major community involvement programs such as parental advocacy and academic/ social support service organizations are in place to facilitate positive academic performance/achievement.	X		The Family and Community Partnerships Department has created and implemented a wide variety of support services. These include: the Community Achieves Program, Parent University, Hero Program, Bringing Justice to You, Before and After School Programs, and Career and Family Resource Centers.
28.	<b>Community Involvement.</b> The school system has established a strong network of community and business partners to leverage valuable resources.	X		Several key local Nashville organizations such as Alignment Nashville, PENCIL Foundation, Nashville Chamber of Commerce, Nashville Afterschool Alliance, and the Mayor's Office of Children and Youth, and representatives from the majority of Nashville higher education institutions and local business partners work together to provide education-based community support services for the School System.

**Exhibit 1-5**  
**Summary of Best Practices - District Organization and Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
29.	<b>Community Involvement.</b> The school system has established policies, procedures, and guidelines for parent and community volunteers including background checks and volunteer training requirements to ensure both the volunteers and schools have a positive experience in a safe and secure environment.	X		The PENCIL Foundation provides this service for the School System. PENCIL assists the School System with securing volunteers, conducting background checks, training volunteers and school staff, as well as policies and procedure to guide and facilitate working together.
30.	<b>Community Involvement.</b> Each school has a complement of parent volunteers and community partners that provide additional support and resources for learning.	X		While PENCIL assists all schools with securing volunteers and community partners, many schools have Parent Advisory Committee members and many do not. Parent Advisory Committee members serve a useful role in providing input for individual school needs. <b>See Accomplishment 1-K.</b>
31.	<b>Community Involvement.</b> The school system has a tracking mechanism in place to document the number of volunteers, volunteer hours, and monetary and in-kind donations contributed.	X		The PENCIL Foundation performs this function for the School System. <b>See Accomplishment 1-K.</b>
32.	<b>Community Involvement.</b> The school system has an external fundraising unit to assist with soliciting and attaining donations and contributions to supplement/expand resources.	X		The Nashville Public Education Foundation performs this function and has raised more than \$12,000,000 over the past five years for the School System. <b>See Accomplishment 1-L.</b>

**Exhibit 1-5**

**Summary of Best Practices - District Organization and Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
33.	<b>Community Involvement.</b> The school System evaluates community involvement programs on an annual basis to ensure effectiveness.	X		The Family and Community Partnerships Department has established goals and measures success against these goals. The Department evaluates the largest of its programs on a regular basis. However, the evaluation process could be further improved by measuring the cost effectiveness of its programs to ensure staff and other resources are used optimally. <b>See Observation 1-S.</b>

Source: McConnell Jones Lanier & Murphy LLP Review Team.

## ACCOMPLISHMENTS

### ACCOMPLISHMENT 1-A

**The board adopted John Carver’s Policy Governance® model in 2003 in an effort to improve its existing governance structure and enable the board to focus on larger issues confronting the School System.**

The Policy Governance® model is essentially a “hands-off” governance model in which the board sets broad policy parameters, allows the director of schools to freely operate within those parameters, and holds the director of schools accountable for results.

After adopting John Carver’s Policy Governance® model, the board customized the model to best fit its needs—restructuring its policies to reflect the guiding principles of Policy Governance® and integrating those principles throughout board policies divided into four categories:

- Governance Process (GP Policies) – How the board will do its job.
- Board/Director Relationship (B/DR Policies) – Includes evaluation expectations for the director of schools.
- Executive Expectations (EE Policies) – Sets administrative expectations.
- End Results for Children (E Policies) – Desired outcomes for children.

The board policies clearly define the roles and responsibilities of the board and director of schools, and define the board’s expectations of the director of schools. For example, policies related to the Governance Process and Board/Director Relations are the responsibility of the board and policies related to Expectations and End Results for Children are the responsibility of the director of schools. The board reviews its Governance Process and Board/Director Relationship policies annually, while it monitors Executive Expectations and End Results for Children policies through the director of schools’ work.

By clearly defining the roles and responsibilities of the board and director of schools, and articulating those roles and responsibilities in well-constructed policies, the School System’s board encourages and sustains an effective, team-oriented working relationship.

### ACCOMPLISHMENT 1-B

**The director of schools is a skilled leader who is well respected by the board and stakeholders within and outside the School System.**

Dr. Register joined the School System in January 2009 when it was on the brink of state takeover because of low performance of a majority of the schools within the system. The director of schools stabilized the School System’s bureaucracy, leading it to place in the state of Tennessee’s second highest achievement category for public schools in 2013, placing it in the top third of Tennessee school districts.

One board member said: “the director of schools is trusted by the board because he is an effective leader, good manager, and an excellent communicator—there are no secrets with him. He understands the need to keep the board informed at all times. The board had the right person at the right time; the School System is positioned for success.”

A majority of board members spoke admiringly of how skillfully the director of schools navigated the perilous political waters engulfing the internal and external stakeholder communities, gaining the confidence of central administrators, principals, teachers, parents, community members, and members of the business community. Further, the director of schools devoted considerable resources to the Inspirational Schools Partnership with the Tribal Group and the Annenberg Institute for School Reform at Brown University to strengthen the link between the central office and schools through innovative programs to boost student achievement.

#### **ACCOMPLISHMENT 1-C**

**In September 2013, the board adopted *Education 2018: Excellence for Every Student*, the School System’s comprehensive five-year strategic plan that the director of schools and executive leadership team created in collaboration with the board and the stakeholders.**

The strategic plan is the culmination of extensive reform efforts to improve student achievement and restore the credibility of the School System. It clearly articulates the vision and mission of the School System, emphasizes “personalized learning” as a lever of change, and includes specific student performance and system performance goals to be achieved using three distinct strategies: 1) quality teaching; 2) equity and excellence; and 3) transformational leadership. The plan outlines three specific objectives for each strategy that are linked to the student and system performance goal categories.

The School System uses its strategic plan as a guide to ensure all schools and central office divisions tailor activities to achieve student and performance goals to execute the mission, vision, and beliefs. The plan seamlessly links student performance goals and objectives to measurable outcomes, and all division budgets. Accordingly, the School System uses the strategic plan to establish annual priorities, and it allocates budget resources based on those priorities.

Comprehensive strategic plans are important because they enable the School System to focus on specific goals and objectives, and the strategies necessary to achieve them. Measurable outcomes and key performance indicators included in the plan allow the managers and executive leadership team to monitor actual versus planned performance.

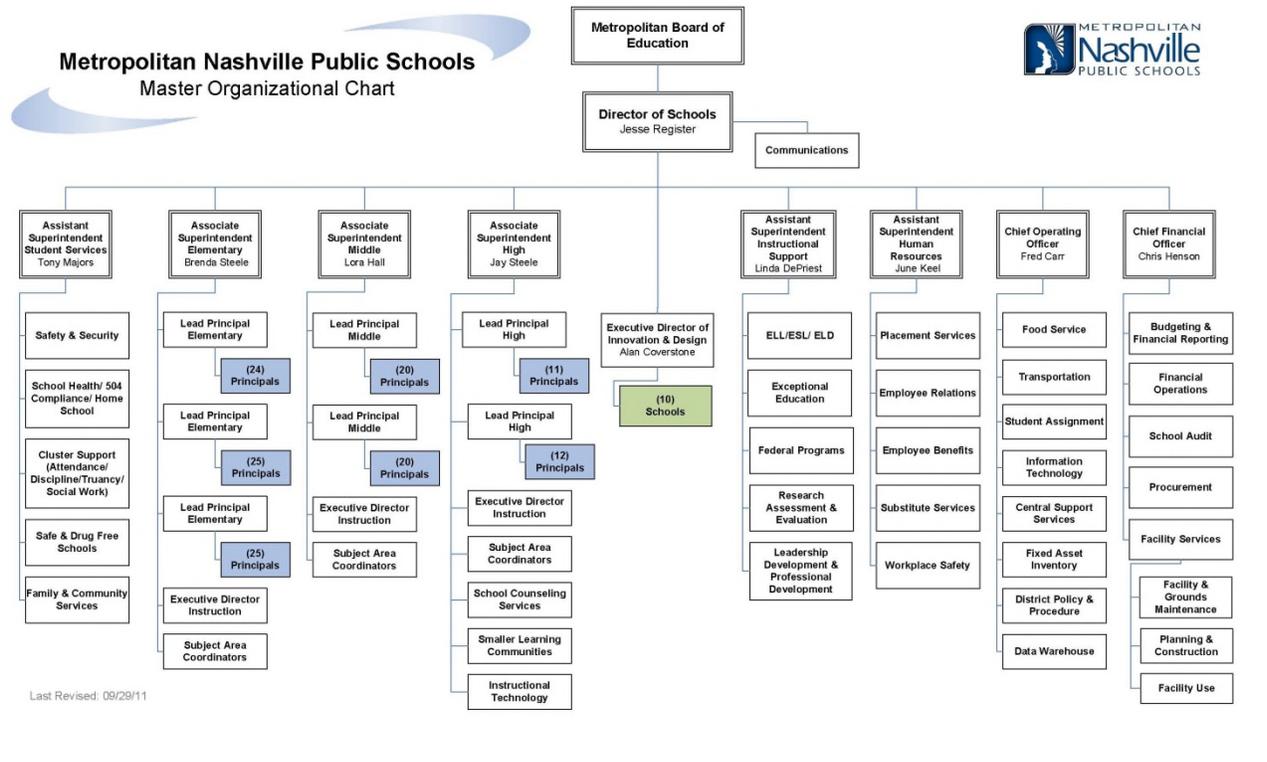
#### **ACCOMPLISHMENT 1-D**

**The director of schools restructured the School System’s organization to support student and system performance goals included in the long-term strategic plan.**

The director of schools reorganized the School System to support student achievement and system performance goals included in the strategic plan in January 2013. The old organization did not effectively support *Education 2018: Excellence for Every Student*, which is the culmination of reform efforts underway in the School System since May 2009. Under the previous organizational structure, the director of schools had a span of control of nine direct reports, plus a director of Communications on staff. This span of control did not reflect a coordinated effort for student achievement and did not include functions to coordinate accountability for measurable outcomes to improve student achievement and operational performance.

**Exhibit 1-6** presents the School System’s previous organizational structure.

**Exhibit 1-6**  
**Metropolitan Nashville Public Schools Previous Organizational Structure**  
**December 2012**



Source: Metropolitan Nashville Public Schools, Office of the Director of Schools, June 2014.

The director of schools restructured the previous organization to establish one unit to oversee all schools and innovative teaching and learning, with other School System departments designated as support services units and expanded the organization to include a strategic planning and management function, as well as an accountability and program results management function. **Exhibit 1-3**, presented earlier in this chapter, is the School System’s restructured organization which achieves the following goals:

- consolidates all schools, teaching and learning functions, and the Office of Innovation (which works with charter schools) in the academic unit under the oversight of a chief academic officer who reports directly to the director of schools;
- designates all other operational functions as units providing support services to achieve student performance and system performance goals included in the strategic plan;
- creates a strategic planning and management function within the Office of the Director of Schools to monitor the implementation of initiatives in the strategic plan;
- creates a program results management function within the Office of the Director of Schools to work with the executive leadership to provide accountability for results by developing key performance indicators to track and monitor measurable outcomes from initiatives included in the strategic plan; and

- reduces the span of control to five direct reports to the director of schools from 10.

The School System's restructured organization now reflects best practices as it has clearly defined units, clear lines of authority, and supports the implementation of strategic initiatives necessary to achieve student and system performance goals included in the strategic plan.

#### **ACCOMPLISHMENT 1-E**

**The board designed a comprehensive evaluation tool that links the director of school's annual evaluation to measurable outcomes included in Education 2018: Excellence for Every Student, the School System's five-year strategic plan.**

The board designed the director of school's two-part evaluation tool to assess his performance in executing strategies included in the School System's five-year strategic plan that continuously improve student, adult, and system performance outcomes. In Part I, the board, in collaboration with the director of schools, aligned the comprehensive evaluation tool with the five key outcome areas included in the strategic plan: 1) Student Performance; 2) System Performance; 3) Quality Teaching Strategy; 4) Equity and Excellence Strategy; and 5) Transformational Leadership Strategy. The evaluation tool gauges the director's performance in each of these areas with key performance outcomes related to 13 student outcome goals, three systemwide strategies, and nine objectives.

Each outcome area has specific, measurable outcomes that seamlessly link to school improvement plans and divisional action plans that include yearly targets, which determine the director of school's overall performance against expected goals and outcomes included in the strategic plan. These school improvement plans and divisional action plans form the foundation to quantitatively measure the director of school's performance in executing the elements of the strategic plan, which are equally linked to the School System's mission, vision, and beliefs.

Part II of the evaluation tool is a "Behavioral Competency" section that measures the director of school's competency with "soft skills," including:

- courage;
- leading transformational change;
- executive disposition;
- driving execution; and
- operational decision-making.

The benefits of this comprehensive, well-designed evaluation tool accrue to both the board and director of schools, as each contributed to and understands the foundation for managing expectations and evaluating the director of schools' performance. Moreover, linking the director of schools' performance to the system's strategic plan elevates student achievement, system performance, and enhances communication and trust between the board and director of school, which is essential to a productive working relationship.

**ACCOMPLISHMENT 1-F**

**The School System implemented an innovative “school-to-school network” of lead principals to empower principals in the School System’s most successful schools to serve as mentors for principals in elementary, middle, and high schools throughout the system.**

The director of schools consulted with the Tribal Group, a consulting firm from the United Kingdom, to implement an innovative school-to-school network of outstanding principals who “use their skills and experiences to support schools in challenging circumstances.” Branded as Network Lead Principals, the director of schools and chief academic officer modeled the network after the Raising Achievement Transforming Learning network in the United Kingdom, which successfully used mentors to bolster principals’ confidence that real improvements could occur in their schools based on their knowledge and prior experiences.

The network lead principals concept, as designed for the School System, uses seven executive lead principals and 11 network lead principals to coach principals and ultimately improve student outcomes in schools led by the principals they mentor. These network principals are accountable for outcomes in their own schools, as well as for outcomes in the network schools with which they work. Because they have this accountability, the director of schools and chief academic officer provided these 18 principals with budget flexibility and the autonomy to staff their schools, select their assistant principals, and manage parental and community involvement.

Implementing a network of lead principals to serve as mentors for other principals throughout the School System has enabled all principals to learn from the collective experiences of the best and brightest school leaders. This practice also allows the chief academic officer to incrementally increase the leadership capabilities of principals. This increase in instructional and operational leadership capacity enables principals to efficiently manage their schools and instructional programs to boost student performance.

**ACCOMPLISHMENT 1-G**

**The School System’s Communications Department has created a Customer Service Center that provides parents and community members with quick access to information at an enhanced service level.**

The Communications Department provides centralized information services to thousands of parents, community members, and employees through its Customer Service Center that operates using a call and walk-in visitor welcome center approach. Both the call and walk-in visitor center are located at the rear of the Central Administration Building. Based on the review team’s experience evaluating this type of operation, most school systems have not implemented this type of sophisticated customer service operation. Typical assistance provided by the Customer Service Center includes processing information requests or resolving problems for the following:

- school system policies;
- teaching and learning standards;
- school registration for families new to Nashville;
- school choice outside of the zoned areas;
- bus transportation;

- school discipline issues;
- transcripts;
- home schooling;
- test results;
- summer school registration; and
- employment information.

On average, the Customer Service Center receives and responds to more than 130,000 calls and nearly 20,000 visitors during an academic school year. **Exhibit 1-7** provides a statistical summary comparison of the Center’s operation for the first semester of both 2012 and 2013.

**Exhibit 1-7** also provides a snapshot of the December 2012 and December 2013 comparison that shows a significant increase in call volume in 2013, and a decrease in the percentage of calls answered within 30 seconds. However, for the same snapshot for the entire first semesters of 2012 and 2013, there were fewer overall calls in 2013 with virtually identical percentages of calls abandoned or answered within 30 seconds.

**Exhibit 1-7**  
**Customer Service, Call Volume Comparison**  
**1st Semester 2012 vs. 1st Semester 2013**

Year	Calls Accepted	Calls Answered	Other*	Abandoned Calls	Percent Abandoned Calls	Percent Answered Within 30 Seconds
2012 December	5,827	5,358	4	465	8.0%	84.2%
<b>2013 December</b>	<b>7,357</b>	<b>6,391</b>	<b>21</b>	<b>945</b>	<b>12.8%</b>	<b>74.9%</b>
2012 1st Semester	67,920	62,059	45	5,816	8.6%	78.2%
<b>2013 1st Semester</b>	<b>64,098</b>	<b>58,393</b>	<b>46</b>	<b>5,659</b>	<b>8.8%</b>	<b>77.8%</b>

Source: Metropolitan Nashville Public Schools Communications Department, February 2014.

\* The number of calls shown in the “Other” column represents calls unaccounted for in the statistics provided by the Customer Service Call Center.

**Exhibit 1-8** disaggregates the category and general purpose of calls handled by the Call Center for the 1st semester of 2013. The highest number of calls is related to general requests for information, followed by calls related to student assignment, transportation, and schools.

**Exhibit 1-8  
Customer Service, Top Customer Contact Drivers  
1<sup>st</sup> Semester 2013**

Employee Services	General Request	Schools	Student Assignment	Transportation	Other Miscellaneous*	Total Calls Accepted
5,995	27,932	7,179	11,475	10,876	641	64,098
Human Capital	Department/ Employee	Registration	Optional School Application	Bus Stop ETA " (20% fewer )*	-	-
Employee Benefits	Student Records	Complaint	School Assignment	Bus Stop Information	-	-
Finger Printing	Directory Information	Calendar	Medical/Hardship Transfer Request	Bus Stop Request	-	-

\* Notable drop in calls and tickets for Transportation compared to 1st Semester 2012.

\* The "Other Miscellaneous" column includes calls that were not categorized into one of the top five contact drivers compiled by the Customer Service call center.

Additional customer contact drivers for the 1<sup>st</sup> semester of 2013 are shown below.

Walk-in Customer	Email	Outbound Call	Document Receipt	Student Records
<b>9,380</b>	<b>1,452</b>	<b>1,830</b>	<b>3,004</b>	<b>2,168</b>

Source: Metropolitan Nashville Public Schools Communications Department, February 2014.

**Exhibit 1-9** also provides data on the average business days needed to resolve calls for service or complaints. Further, it allocates the nature of the calls as seeking information, expressing concerns, or submitting complaints.

**Exhibit 1-9  
Customer Service, Resolution Response  
1st Semester 2012 versus 1st Semester 2013**

Semester Ticket Resolution Response	Average Business Days to all Ticket Resolution	Average Business Days to Complaint Resolution	Highest Number of Business Days Resolve Tickets Opened
Elementary Schools	4.2	5.1	23.7
Middle Schools	2.3	2.8	8.4
High Schools	1.5	1.8	9.2
Innovation Cluster	2.1	2.4	7.0
General Education Transportation	3.6	4.6	7.8
Exceptional Education Transportation	5.5	5.9	30.1
Systemwide 2012	2.9	3.4	-
Systemwide 2013	<b>3.6</b>	<b>4.2</b>	-

Source: Metropolitan Nashville Public Schools Communications Department, February 2014.

The Communications Department actively encourages community members to use the Customer Service Center to obtain important information to kick-off the start of school. The department believes the smoother the school year starts, the more likely it will be successful. Accordingly, the Customer Service Center isolates operating statistics for two weeks prior and one week after school begins to get as much information out to parents and community members as possible.

**Exhibit 1-10** documents that just over 50 percent of all calls during this high-volume demand period in both 2012 and 2013 were answered with very minimal wait time and that 66 percent of the calls were answered within 30 seconds.

**Exhibit 1-10** reflects a slight reduction in demand in 2013 and solid maintenance of all performance standards for the three week period. This information is a reflection of the extra effort of the Customer Service Center and the School System, which may suggest that as customer needs are being met, fewer calls come into the call center and call volume declines.

**Exhibit 1-10  
Customer Service Center Report  
Start of School Snapshot for Two Weeks Before and One Week after the Start of School  
1st Semester 2012 vs. 1st Semester 2013**

Date	Calls Accepted	Calls Answered	Calls Answered With No Wait	Percent Calls Answered With No Wait	Total Abandoned Calls	Total Percent Abandoned Calls	Percent Calls Answered 30 Seconds
2012	16,825	14,569	8,584	50.9%	2,247	13.4%	66.4%
2013	15,751	13,643	7,981	50.4%	2,096	13.3%	65.9%
<b>2012 to 2013</b>	<b>(1,074)</b>	<b>(926)</b>	<b>(603)</b>	<b>(0.5%)</b>	<b>(151)</b>	<b>(0.1%)</b>	<b>(0.5%)</b>
8/1/2012	1865	1041	166	8.9%	820	43.9%	18.3%
<b>8/1/2013</b>	<b>1862</b>	<b>1215</b>	<b>250</b>	<b>13.4%</b>	<b>632</b>	<b>33.9%</b>	<b>25.1%</b>

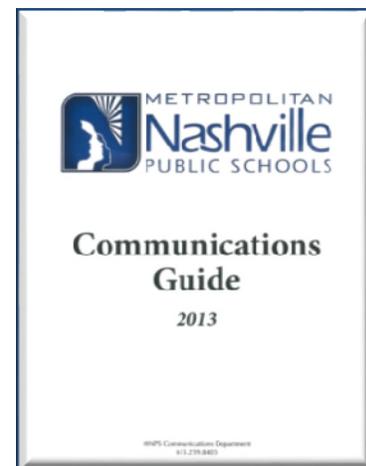
Source: Metropolitan Nashville Public Schools Communications Department, February 2014.

#### ACCOMPLISHMENT 1-H

**The School System’s Communications Department has developed an extensive guide that provides clear direction on all aspects of internal and external communication.**

Every employee of the School System has one exhaustive resource that provides quick and consistent guidelines that stress the importance of providing accurate and clear information to all stakeholders whatever the circumstances may be. Clear lines of authority are noted in the guide.

The Communications Guide addresses the importance of “honest and effective communications with everyone served – students, parents, teachers, support staff, business professionals, community organizations, elected officials, community leaders and the news media.”



The document emphasizes that “every employee of the School System is part of the communications team” but not every employee is called upon to communicate directly on all matters of interest to the School System’s stakeholder. Importantly, the introduction of the formal guide provides a direct contact for all employees to reach for guidance on any specific matter involving communications so that misinformation or miscommunication can be avoided.

The guide distinguishes between internal and external communications while providing insight into the different challenges each obligation presents. Moreover, the guide is extensive in addressing the scope of the challenges the School System faces in developing a plan that is both comprehensive and cohesive.

The strengths of the different components of the communications guide are highlighted in **Exhibit 1-11** and include the following:

### **Exhibit 1-11** **Communications Guide, 2013**

#### Summary of Communications Guide Content

- **Vision Statement** – Incorporates the duty of effective communications that engages all families, recognizes the responsibility of parents and caregivers to drive success for students, strengthens connections with the entire community to support all areas of student growth, and establishes effective two-way communications with parents and other stakeholders. Endorses the fundamental foundation of what guides effective communications: transparency and accountability.
- **Communications Staff** – Provides a valuable resource that gives detailed information including the names, positions, general duties, and contact numbers including email of the leaders and staff members of the communications’ staff. Employees can turn to these individuals as needed for advice or referral of any matter involving communications.
- **Visual Identity – Getting The Look** – Provides visualization and branding as represented by logos, which are an important component of consistent, effective communications. The guide provides detailed instructions on the use of the School System’s logos for both print and electronic usage.
- **The Academies of Nashville Logo Guidelines** – Establishes the same standards of branding for the School System itself apply to the Academies of Nashville. This program is an important component of the School System but it does have its own separate identity in terms of public perception that is incorporated into its own logo. Consistency is an important part of visual communications.
- **Designed Guidelines for Printed Items** – Provides rigorous design guidelines for printed items to accomplish this important function of communication. Provides explicit directions on matters of law that must be included in printed documents. Practical tips on document creation are provided and information including contact data about the School System’s centralized printing and mail services are also given.
- **Board of Education** – Supplies names, positions, and contact information for each of the School System’s board of education members. The ability of employees to communicate this basic information is important.
- **Website Publishing** – Establishes six distinct areas of responsibility including, accessibility, timeliness, accuracy, professionalism, relevance, and quality of writing. While each school and department is responsible for content posted to its website, key employees have been trained in website management and given oversight duties.
- **Publication Style Guide** – Encourages consistency in producing written documents for distribution to the public. Offers practical tips on grammar, use of acronyms, school board references, position titles, numerical usage and other common matters even including telephone protocols.
- **ParentLink** – Serves as a tool that allows the School System to schedule, send, and track personalized voice, email, and text messages to thousands of parents, faculty, and staff in minutes. Permits broad based communication or ones that are highly targeted on the basis of a wide variety of demographic factors. Offers explicit advice on the kinds and formats of messages that have proved to be the most effective for the technology employed. Potential users of Parent Link are provided contact information that can be accessed for assistance 24 hours a day.

**Exhibit 1-11**  
**Communications Guide, 2013 (Cont'd)**

**Summary of Communications Guide Content**

- **Media Relations Guide** – Establishes an essential standard of discipline that governs interaction of employees with any news media outlet. Describes the actual number of individuals within the School System who have authority to speak to the news media on the expansive range of inquiries that are routinely submitted by the news media. Establishes a clear duty that employees who are contacted by reporters of any news media outlet for interviews, photography, or videotaping should be directed first to the Communications Office. Offers very practical tips to employees who do interview or interact with the news media. The strength of the School System’s approach to media relations is at least two-fold. It protects the School System from being ‘blindsided.’ Offers employees well-reasoned and time-tested strategies that emphasize that honesty and forthrightness are always the best approaches in dealing with the news media.
- **Critical/Crisis Communications** – Prepares for sudden developments or even crisis that can happen on a second’s notice. Provides detailed guidance including emergency contact numbers of appropriate officials or departments that must become engaged as quickly as possible. The government or legal issues governed by privacy laws. Emphasizes a process that should be implemented when such situations arise.
- **Special Events** – Notes occasions such as groundbreaking ceremonies, grand opening of schools, or other significant celebratory events offer an extraordinary opportunity to communicate positive news about the School System including the campus or group that is hosting the actual event. Encourages sponsors to develop and implement a strategic plan to maximize the communications opportunities that such occasions permit.
- **School List** – Provides a comprehensive contact list including the name and contact number for each principal in the School System (including photographs of individual school principals).

*Source: Metropolitan Nashville Public Schools Communications Department.*

#### **ACCOMPLISHMENT 1-I**

##### **The Communications Department effectively uses electronic and social media and multi-lingual outreach strategies to reach external stakeholders.**

The School System uses a wide variety of electronic media vehicles such as the School System’s website, multi-language social media blasts and accessing multi language television coverage to reach and communicate with School System stakeholders. The School System also effectively leverages print media to keep the public aware of its activities and events.

According to statistics maintained by the School System, its website received almost 1,000,000 page views during July and August 2013 alone. Individual school web pages have been recently updated to provide more information to parents and community members about academic performance at that particular school, community partners, and volunteer opportunities and efforts.

Local network and multi-language television stations routinely cover “first day of school” activities and all school board meetings are covered on a local cable channel. The Tennessean, the largest print media newspaper in Nashville, typically reports news stories about the School System once or twice per week.

**Exhibit 1-12** shows that 53.1 percent of central administrators and 50.8 percent of teachers, respectively, agree or strongly agree that the School System’s website has information for community members who want to be school volunteers. Response rates from principals/assistant principals were even higher at 73.1 percent for the same question. When asked about local television and radio station coverage, 57.8 percent of central administrators strongly agreed or agreed that local television and radio stations regularly report school news and menus. Forty three percent of support staff strongly agreed or agreed with the same question as central administrators.

**Exhibit 1-12  
Communications Department Survey Results  
Website, Local Television, and Radio Coverage**

Question		Percentage Responses				
The district’s web site has information for community members who want to be school volunteers.	Number of Survey Respondents	Agree or Strongly Agree	Somewhat Agree	Disagree or Strongly Disagree	N/A	Total
<b>Survey Group</b>						
Central Administrators	62	53.1%	28.1%	3.1%	15.7%	100.0%
Principals/Assistant Principals	104	73.1%	17.3%	4.8%	4.8%	100.0%
Support Staff	438	50.3%	27.4%	8.2%	14.1%	100.0%
Teachers	1,208	50.8%	28.7%	10.2%	10.3%	100.0%

Question		Percentage Responses				
The local television and radio stations regularly report school news and menus.	Number of Survey Respondents	Agree or Strongly Agree	Somewhat Agree	Disagree or Strongly Disagree	N/A	Total
<b>Survey Group</b>						
Central Administrators	62	57.8%	15.6%	12.5%	14.1%	100.0%
Support Staff	438	43.1%	26.7%	7.9%	22.3%	100.0%

*Source: McConnell Jones Lanier & Murphy LLP Surveys of Central Administrators, Principals/Assistant Principals, Support Staff, and Teachers, May 2014.*

### ACCOMPLISHMENT 1-J

**The School System’s Family and Community Partnerships Department has implemented a broad range of academic and social support programs targeted toward helping students and families to overcome impediments to educational and personal success.**

One of the strongest areas of educational research confirms that increased parental involvement in children’s educational lives through collaborative participation in public education produces benefits for students including lower dropout rates, higher graduation rates, and higher levels of preparation to succeed in post-secondary academic or career pursuits.

The School System’s Family and Community Partnerships Department efforts are well-structured.

Guiding operational principles include:

- strong commitment to parent engagement;
- positive school environment and culture;

- comprehensive and effective communications between the school and home;
- parental educational programs that foster intellectually, socially, and emotionally healthy children;
- consistent and meaningful opportunities for parents to share their voice and insights with the school; and
- varied opportunities for parents to engage in meaningful and productive school activities.

Major Family and Community Partnership programs include:

- **Community Achieves** – Nineteen campuses throughout the School System target four key areas of engagement including College and Career Readiness, Family Engagement, Health and Wellness, and Social Services. These programs provide services for students, parents, and community members at-large. Resources include Family Resource Centers, health clinics, after-school programs, recreation, and adult education.
- **Parent University** – The program offers life skills recognizing that parents, guardians, or caregivers want their children to succeed in life. It also recognizes that parents sometimes need help to better understand what they can do from a very practical standpoint. Thus, the motto of Parent University is not just words: “Helping Parents, Helping Children.”
- **Hero Program** – Over 2,700 homeless students have been provided clothing, school supplies, and other support to help the families keep their children attending school.
- **Bringing Justice to You** – Even minor misdemeanor criminal offenses can wreak financial havoc on families. This program helps family members expunge such offenses so that impediments to family support needs, such as steady employment, can be eliminated so that parents and students can have a productive life.
- **Before and After School Programs** – These programs serve many positive functions including helping parents meet obligations to employers knowing that their children are in a safe environment. Academic enrichment, homework, and recreation are supervised by professionals.
- **Career and Family Resource Centers** – There are 16 such centers in operation serving as a valuable partner in the lives of families in neighborhoods with significant needs. Partnerships with social service providers, schools, businesses, faith-based organizations, and others are located in the communities making access to service readily available.
- **Community Outreach Specialists** – The School System employs social workers that coordinate all of the services provided to students and their families.
- **D.O.G.S.** (Dads of Great Students) – Invites fathers, grandfathers, uncles, or other father figures to volunteer at least one day at the student’s school during the year. It is a rigorously supervised program that has literally brought thousands of individuals who are important to the lives of students into the school as positive role models.

**ACCOMPLISHMENT 1-K**

**The School System has successfully leveraged financial and operational support with key community partners that have provided a wide range of services and support to enhance educational opportunity and achievement for the students and families of the community.**

Several key local Nashville organizations such as Alignment Nashville, PENCIL Foundation, Nashville Chamber of Commerce, Nashville Afterschool Alliance, and the Mayor's Office of Children and Youth, and representatives from the majority of Nashville higher education intuitions work together to provide education-based community support services for the School System.

Direct program planning and coordination support from Alignment Nashville and the PENCIL Foundation have touched every level of family and community involvement programs in the School System from elementary to secondary to a broad range of community outreach initiatives, which include the following:

- **Alignment Nashville** acts as a “convener” for the School System’s family and community involvement initiatives by bringing together leaders from the business and civic community to problem solve and identify innovative approaches to meet the diverse needs of the schools. This organization has established 24 committees that brainstorm, plan, and help to garner resources for the School System.
- **PENCIL Foundation** has created a large network of businesses, organizations, and faith-based groups that have provided tutors, mentors, and general volunteers to help students succeed in the classroom. PENCIL’s main responsibility is to assist with securing volunteers, conducting background checks, training volunteers and school staff, as well as policies and procedures to guide and facilitate working together. PENCIL also ensures that schools have the “right partners” to meet schools’ needs. During the 2013 school year, PENCIL helped the School System to secure 829 partners which provided over 10,000 volunteers who contributed over 110,000 volunteer hours in over 150 school campuses, producing a community investment of over \$2,400,000.
- **Nashville Higher Education Institutions** provide support through the involvement of over 40 presidents, deans, professors, directors, and administrative leaders of dozens of Nashville’s institutions in a variety of programs and initiatives serving students, families, and professional staffs of the School System. Their efforts work to create strong valuable partnerships between the higher education community and the School System designed to improve educational opportunities by helping students develop an appreciation, vision, and commitment to achieving success in their academic lives.

**ACCOMPLISHMENT 1-L**

**The Nashville Public Education Foundation has raised \$12,257,000 over the past five years alone to support specific initiatives for the School System to provide supplemental educational opportunities for students from elementary through high school.**

The School System is supported by an external foundation, founded in 2002, that primarily provides academic enrichment for students. **Exhibit 1-13** shows the extra financial support provided to the School System from the Foundation for the years 2009–2013.

**Exhibit 1-13**  
**Summary of Nashville Public Education Foundation**  
**Financial Contributions from 2009 through 2013 (\$ in Thousands)**



Source: Nashville Public Education Foundation 990 Filings.

Examples of the programs supported by the Nashville Public Education Foundation include the following:

- Keep the Music Playing
  - The program was created by the Country Music Association’s Artist Relations Committee. Since 2006, the effort has purchased over 4,000 instruments for School System students. The creation of Music Labs remains a high priority.
- Music Makes Us: The Nashville Education Project
  - The Office of Music Education was established in 2012-2013. The program director and staff have begun implementing music education curriculum across all grade levels. Nashville Mayor Karl Dean and the Music City Music Council define two key objectives to the program: 1) Support student learning in the School System, and, 2) Benefit the local music industry’s long-term interests by developing a homegrown pool of future professionals and artists.
- One Step Ahead
  - This program provides critical financial tuition support allowing high school students to participate in dual enrollment classes at universities or community colleges. Earning college credit while in high school is both a future financial benefit to students and their families and creates incentive to successfully graduate from high school.

- Scholars Academy
  - This “no cost” program includes the summer academy for ninth graders to help prepare them to succeed in the rigorous high school environment. Monthly sessions continue throughout the school year for this group of scholars to encourage the development of those skills that will help them succeed in high school and lay the foundation for post-secondary success. The Scholars Academy is held at Cane Ridge High School, Glencliff High School, Maplewood High School, and Pearl-Cohn High School.
- The Academies of Nashville
  - Zoned high schools have been redesigned into smaller learning communities that focus on a career or academic theme delivered in a highly personalized learning community. Students explore multiple career choices; learn skills required in various industries; have an opportunity to meet potential employers through classroom presentations, formal internships, visits to various businesses, and job shadowing. The program is designed to produce immediate progress in lowering dropout rates and improving attendance. The percentage of students graduating on time, and having achieved college or career ready capabilities will be a longer term standard of measuring the program’s success.

## DETAILED OBSERVATIONS

### GOVERNANCE

The Metropolitan Nashville Public Schools Board of Public Education (the board) consists of nine members elected from single-member districts, each serving four year terms on a rotating basis. The terms are staggered so that no less than four members are elected every two years. Two students from the Student Advisory Council serve with the board, but have no vote. **Exhibit 1-14** lists members of the 2013-2014 board.

**Exhibit 1-14**  
**Metropolitan Nashville Public Schools**  
**Metropolitan Board of Education, 2013–2014**

Board Member	Title	District	Term Expires	Occupation
Cheryl D. Mayes*	Chairperson	District 6	2014	Accountant
Anna Shepherd	Vice- Chairperson	District 4	2014	Payroll Manager
Sharon Dixon Gentry, Ed.D.	Member	District 1	2016	Healthcare IT Manager
Jo Ann Brannon, Ed.D.	Member	District 2	2014	Retired Educator, Adjunct Professor
Jill Speering	Member	District 3	2016	Retired Educator
Elissa Kim	Member	District 5	2016	Teach for America
Will Pinkston	Member	District 7	2016	Communications Professional
Michael Hayes*	Member	District 8	2014	Commercial Real Estate Developer
Amy Frogge	Member	District 9	2016	Attorney/Grant Writer

Source: Metropolitan Nashville Public Schools, Director of Schools Office, January 2014.

\* Cheryl D. Mayes and Michael Hayes were replaced with new board members in the August 2014 school board elections.

The board meets the second and fourth Tuesdays of every month, except December when the board meets on the second Tuesday only. The board holds its regular meetings on the second Tuesday of each month at 5:00 p.m. in the boardroom of the Administration Building located at 2601 Bransford Avenue. On the fourth Tuesday of each month, the board holds formal work sessions, which are meetings that do not require action and are not considered business meetings. Board members use the work session to receive information for study and to interact with the director of schools and members of the executive leadership team to understand specific programs, initiatives, and issues that may come before the board. The board may call special meetings to conduct business between regularly scheduled board meetings.

The board executive secretary maintains a calendar of all board events, which she places on the School System's website that is continuously updated with adequate notice of the date, time, location, and agendas for meetings that involve two or more board members. The Public Information Office distributes media releases providing notice of regular and special meetings, and work sessions to all media entities, business contacts, community leaders, government agencies, and parents.

Members of the public are invited to attend all regular meetings and work sessions, but those wishing to address the board must do so only at the regular meeting. Accordingly, persons wishing to speak to the board about specific agenda items considered at the regular meeting must submit written requests to address the board to the board's executive secretary by 4:30 p.m. on the Friday before the regular meeting.

The chairperson of the board, vice chairperson of the board, director of schools, and the board executive secretary meet on the fourth Wednesday of each month to develop the agenda for the regular board meeting on the second Tuesday of each month. The chairperson of the board solicits individual board members for items they wish to place on the agenda; however, items placed on the agenda come from a variety of sources including suggestions from the director of schools, items presented by members of the director of schools' executive leadership team, and citizens. Items to be considered for the agenda must be submitted to the board executive secretary, with supporting background information, by 5:00 p.m. on the Wednesday of the week before the regular board meeting.

Once chairperson, vice chairperson, and director of schools approve the final agenda, the board executive secretary emails an electronic portable document format file of the agenda packet to board members by 10:00 a.m. on the Thursday before the regular board meeting, which is five days before the scheduled meeting. The board executive secretary copies the director of schools on the email, electronically transmitting the agenda packet. Each board member has five days to contact the director of schools or members of his executive leadership team with any questions or clarifications they need about information in the electronic agenda packets.

Immediately after emailing the agenda packets to board members, the board executive secretary posts the actual agenda on the School System's website and notifies community members who signed up to receive board agenda updates via email informing them the agenda is available.

The board executive secretary prepares the official minutes of all board meetings. Board meetings and work sessions are recorded on video and the board executive secretary prepares official written minutes from the video tapes and forwards them to all board members with the agenda for the subsequent board meeting. Each board member reviews the minutes for accuracy and completeness prior to approval. The chairperson of the board and board secretary sign the official minutes following approval by the board and the minutes become a part of the public record.

In 2003, the board adopted John Carver's Policy Governance® model in an effort to improve its existing governance structure and enable the board to focus on larger issues confronting the School System. The Policy Governance® model is essentially a "hands-off" governance model in which the board sets broad policy parameters, allows the director of schools to freely operate within those parameters, and holds the director of schools accountable for results. In contrast with governance approaches boards typically use, Policy Governance® separates issues of organizational purpose (described in the model as "ENDS") from all other organizational issues (described in the model as "MEANS"), placing primary importance on those ENDS, which includes the necessity for the board to "speak with one voice."

After adopting John Carver's Policy Governance® model, the board customized the model to best fit its needs, seeking to create a culture that required high-level governance. Accordingly, the board restructured its policies to reflect the guiding principles of Policy Governance®, integrating those principles throughout board policies divided into four categories, which include the following:

- Governance Process (GP Policies): How the board will do its job;
- Board/Director Relationship (B/DR Policies): Includes evaluation expectations for the director of schools;
- Executive Expectations (EE Policies): Sets administrative expectations; and

- End Results for Children (E Policies): Desired outcomes for children.

Policies related to the Governance Process and Board/Director Relations are the responsibility of the board and policies related to Expectations and End Results for Children are the responsibility of the director of schools. The board reviews its Governance Process and Board/Director Relationship policies annually, while it monitors Executive Expectations and End Results for Children policies through the director of schools' work. Essentially, Executive Expectations policies cover the day-to-day operations of the School System, while End Results for Children policies are evaluated through test scores.

**OBSERVATION 1-A**

**Some board members interfere with the day-to-day management and operations of the School System; thereby, violating the guiding principles of Policy Governance® incorporated in the board's policies. Board members who "overreach" into management and operations undermine the authority of the director of schools.**

Exhibit 1-15 presents board members' perceptions of their roles and responsibilities, board communication, and trust summarized from interviews with each member.

**Exhibit 1-15**

**Board Members' Perceptions of their Roles & Responsibilities, Board Communication and Trust**

INTERVIEW QUESTION	MEMBER A	MEMBER B	MEMBER C	MEMBER D	MEMBER E	MEMBER F	MEMBER G	MEMBER H	MEMBER I
Do all board members understand their roles and responsibilities?	NO	NO	YES	NO	YES	YES	YES	NO	YES
Do board members interfere in day-to-day operations?	YES	YES	YES	YES	YES	NO	NO	YES	YES
Do board members generally trust each other?	NO, BUT IMPROVING	YES	YES	NO	YES	YES	YES	NO	NO
Do board members generally trust the director of schools?	YES	YES	YES	YES	YES	YES	YES	YES	NO
Is communication between board members open and honest?	NO, BUT IMPROVING	YES	YES	YES	NO	YES	NO	NO	YES

Source: Interviews of individual board members, February – March 2014.

Note: Board member perceptions recorded in this exhibit are as of the Fiscal Year ended June 30, 2014; individual members' perceptions of their roles and responsibilities, board communication and trust could possibly change as a result of facts and circumstances occurring after June 30, 2014, and before the date the final report is released.

Although five of the nine board members felt all board members understand their roles and responsibilities, seven of the nine members believed there were board members who interfered with the day-to-day operations of the School System. Generally, board members who actively intrude in day-to-day operations and management of a school system do so because they have not been properly trained to perform their governance role. During interviews with members of the board, the majority of them cited

the lack of training as the catalyst for some of their colleagues' inclination to "overreach" into the management and operations of the School System.

In 1990, the Tennessee Legislature mandated that school board members be properly trained during their service on the board and gave the Tennessee State Board of Education (State Board) the responsibility to set the minimum requirements for training. The State Board requires that every board member participate annually in seven hours of training provided by the School Board Academy training program administered by the State Department of Education. All nine board members completed the minimum annual training requirements prescribed by the State Board.

Although members of the current board were not seated as a part of the board that adopted John Carver's Policy Governance® model, a former vice chairperson of the board, who also chaired the board's governance committee, provided an overview of Policy Governance® during a four-hour orientation for new board members. Additionally, a former chairperson of the board conducted a 45-minute review of Policy Governance during the Annual Board Retreat held on September 13–14, 2012, and a former board member again conducted a two-hour review of Policy Governance® during the Annual Retreat held on January 25–26, 2013. The board did not review Policy Governance® during its Annual Retreat held on January 24–25, 2014, but spent three hours and 15 minutes reviewing its Board Policy Manual to make suggestions for revisions, changes, or additions to current policies.

Despite reviewing the principles of Policy Governance® in the orientation for new board members and annually in board retreats, some board members interviewed by the review team stated that Policy Governance® is "complex" and preferred to have additional, targeted training in the nuances of implementing Policy Governance® in the School System. One board member felt the model to be restrictive when juxtaposed against board members roles and responsibilities, while another understood Policy Governance®, but felt it conflicted with board members' position as elected officials.

Dallas Independent School District adopted John Carver's Policy Governance® model in February 2000, three years before the board adopted the model for the School System. Dallas Independent School District Board members attended targeted training conducted by John Carver in an introductory session funded by the Dallas business community, and five separate training sessions funded by Dallas Independent School District *before* adopting the model. In this instance, board members obtained targeted, concentrated training in implementing and sustaining the Policy Governance® model that proved beneficial to individual board members.

#### **RECOMMENDATION 1-A.1**

**Provide targeted training for members of the board related to their roles and responsibilities in adhering to Policy Governance® to reduce the instances of board members' involvement in day-to-day operations that undermines the director of schools' authority.**

The chairperson of the board should closely monitor the continuing education hours obtained by members of the board and provide targeted training related to understanding their roles and responsibilities in the School System's Policy Governance® model. Monitoring the training activities of board members will also help the board identify governance techniques to sustain its Policy Governance culture. This will enable board members to effectively control management's job without meddling, thereby decreasing instances of board involvement in day-to-day operations and undermining the director of schools' authority.

John Carver and Miriam Carver are available to provide specific training in implementing the Policy Governance® model. PolicyGovernance.com, which is John Carver’s authoritative website for the Carver Policy Governance model, lists a menu of training options for boards. Since the board is already using the Policy Governance model, the chairperson may want to consider targeted workshops offered by John and Miriam Carver through PolicyGovernance.com, which is described below:

- **Rehearsal Workshop** – An interactive one-day workshop that allows the rehearsal of board skill in policy use and decision-making. The skills taught enable long-term maintenance of the model.
- **Policy Governance® Academy** – Provides an intensive, advanced five-day learning experience for consultants and other leaders in the principles and application of Policy Governance®. Because it is an advanced training course, the Academy is available only to those who satisfactorily demonstrate an understanding of Policy Governance®.

### FISCAL IMPACT

The fiscal impact of this recommendation ranges from \$800 per person for the Rehearsal Workshop, with a potential 20 percent discount for groups of four or more trustees [ $\$800 \times 9 = \$7,200 \times .80 = \$5,760$ ], to a minimum of \$2,500 per person for the Academy. The board should first consider the Rehearsal Workshop until all of its members can demonstrate an understanding of Policy Governance®.

### OBSERVATION 1-B

**Five of the nine board members feel board members generally trust each other, while the remaining four board members cite a general atmosphere of distrust among board members which, when coupled with Tennessee’s restrictive Open Meetings Act (Sunshine Law), some members feel, inhibits open and honest communication among board members.**

The absence of open and honest communication could, and often does, contribute to ineffective decision-making and a proliferation of distrust among colleagues entrusted with the fiduciary responsibility to govern the School System.

The Sunshine Law [Tennessee Code Annotated § 8-44-102(b)(2)] statutorily defines a “meeting” as “the convening of a governing body of a public body for which a quorum is required in order to make a decision or to deliberate toward a decision.” The Sunshine Law [Tennessee Code Annotated § 8-44-102(b)(1)] further defines “governing body” as “any public body consisting of two (2) or more members, with the authority to make decisions for or recommendations to a public body on policy or administration.” While at least three board members consider the Sunshine Law to be a “primary driver” of an atmosphere of distrust, the provisions of the statute tilt more toward hindering open and honest communication. In fact, **Exhibit 1-15** seems to validate the effect of Sunshine Laws on communication between board members when two board members who believe board members generally trust each other, contrastingly, believe communication between board members is not open and honest.

Based on interviews of board members, there are other issues driving the general atmosphere of distrust among board members. These issues include the board’s divisive 5–4 vote not to approve the Great Hearts Academy charter school application and instances of board members interfering in the day-to-day management and operations of the School System. Moreover, according to one board member, in the board’s annual retreat held on January 24–25, 2014, the board chairperson asked board members to

complete a survey of specific issues or problems requiring the board's attention. Board members ranked the board low in the areas of communication and trust.

When school boards have divisions among its members related to trust and open communication, individual board members must take personal responsibility to improve the overall environment of communication and trust among board members. It is often difficult because board members must first talk candidly with each other to determine the origins of poor communication and distrust (despite restrictive Sunshine Laws), and then make a concerted effort to change the environment. Typically, boards will hire a facilitator to conduct teambuilding sessions during which each board member will complete a personality profile, discuss their individual differences and challenges they have with each other, and participate in a number of teambuilding exercises designed to improve the overall communication and trust among board members. However, all board members must believe teambuilding can improve trust and communication and make individual commitments to actively participate in the training. While the School System's board conducts annual board retreats, none of the three retreats attended by the current governing board have included team building activities.

#### **RECOMMENDATION 1-B.1**

**Conduct a series of teambuilding workshops to improve trust and communication among board members to enhance board deliberations for efficient and effective decision-making.**

The board chair should schedule a minimum of two teambuilding sessions that are mandatory for all board members and the director of schools to attend. An experienced facilitator should lead each session, with the initial session incorporating the Myers-Briggs Type Indicator Instrument assessment tools for all participants to help them better understand themselves and interact with others. The Myers-Briggs Type Indicator Instrument assessment is designed to help people better understand and appreciate individual differences that potentially affect group dynamics and decision-making. It identifies a group's type and its related problem-solving and conflict management styles, as well as how an individual's personality-type preferences influence their approach and response to conflict, providing them with a framework for dealing with conflict situations more effectively and improving relationships. The second session should include conflict management and group dynamics to help the board improve trust and candid, open communication among its members.

The Tennessee School Boards Association offers board retreat services that include teambuilding retreats for school boards and the director of schools. Tennessee School Board Association facilitators conduct the retreats, which can be structured to meet the needs of the board.

#### **FISCAL IMPACT**

The fiscal impact of this recommendation is \$2,400 per year [\$4,800 for two retreats] to have the Tennessee School Boards Association conduct facilitated teambuilding sessions. Board retreat services are \$950 per day, plus expenses. The fiscal impact calculation is as follows:

- Facilitated teambuilding session – \$1,900 [\$950 per day x 2 days].
- Expenses – \$500 [\$150 per day per diem x 2 days = \$300 + \$200 transportation costs].

**OBSERVATION 1-C**

The board has a cumbersome, outdated standing committee structure that does not lend itself to significantly improving governance performance. Since implementing Policy Governance® in 2003, the board has reverted to an outdated committee structure consisting of eight standing committees designated in Board Policy GP-7 and three “*ad hoc*” committees formed for specific purposes.

The standing and *ad hoc* committees, primarily organized around educational and administrative functions rather than governance functions, represent a “silo approach” to structuring board committees. Exhibit 1-16 presents the board’s committee structure in 2013–2014.

**Exhibit 1-16  
Metropolitan Nashville Public Schools Board of Education Committee Structure  
2013-2014**

Board Committee/ Task Force	Type	Committee Charge	Committee Configuration
<b>Advocacy</b>	Standing Committee	Recommend positions to the board on political issues; advance board positions with other governmental officials and educational agencies; and develop coalitions with other entities that share the board’s position.	Three individual board members
<b>Budget and Finance</b>	Standing Committee	Develop and complete the School System’s operating budget based on available revenues for each fiscal year beginning on July 1 <sup>st</sup> .	Committee of the whole
<b>Capital Needs</b>	Standing Committee	Analyze the School System’s facility utilization and needs, and develop a recommendation to the board based on the School System’s long-term facilities master plan.	Three individual board members
<b>Director of School’s Evaluation</b>	Standing Committee	Research, develop, and recommend tools and procedures for the director of schools’ evaluation.	Committee of the whole
<b>Executive Committee</b>	Standing Committee	Meet as often as necessary to perform duties required; advertise for bids; serve as purchasing agent; examine accounts; submit full report of business transactions; any other business assigned by the board.	Board chairperson and director of schools
<b>Ethics</b>	<i>ad hoc</i> Committee	Investigate any credible complaint against an official or employee charging any violation of the Code of Ethics, or may undertake an investigation on its own initiative when it acquires information indicating a possible violation.	Three individual board members
<b>Governance</b>	Standing Committee	Consider policy revisions and perform routine checks on the governance structure for recommendation to the board.	Committee of the whole
<b>Nondiscrimination Procurement Program</b>	Standing Committee	Work in concert with Metropolitan Nashville Government’s plan to increase the offering of procurement opportunities for minorities and women.	Two individual board members
<b>Student Assignment Task Force</b>	Standing Committee	Monitor the current student assignment plan. The committee meets bi-annually.	Two individual board members

**Exhibit 1-16**  
**Metropolitan Nashville Public Schools Board of Education Committee Structure**  
**2013-2014 (Cont'd)**

Board Committee/ Task Force	Type	Committee Charge	Committee Configuration
Teaching and Learning*	<i>ad hoc</i> Committee	Monitor the School System's Performance Framework.	Two individual board members
Naming of Schools	<i>ad hoc</i> Committee	Convene to consider criteria and rationale for naming school buildings.	Three individual members of the board.

Source: 2013-2014 Metropolitan Board of Education Committee Listing and Board Policy GP-7.

\* On July 8, 2014 the board amended Board Policy GP-7, Committees and Appointments, to include the Teaching and Learning Committee as a standing committee.

Note: Two new members were elected to the board in August 2014 and the board's committee structure could possibly change between June 30, 2014 and the date the final report is released.

**Exhibit 1-16** shows that, of the board's 11 standing or *ad hoc* committees, none is charged with strategic and operational planning or stakeholder/community relations. Further, the board recently established the Teaching and Learning Committee which, while charged with monitoring the School System's performance framework, is merely an *ad hoc* committee which is not included as a standing committee in Board Policy GP-7 as of June 30, 2014. Additionally, the Budget and Finance, Governance, and Director's Evaluation committees operate as committees of the whole, while the remaining eight committees have one to three members. This committee configuration often contributes to ineffective communication as board members are dispersed among disparate committees, some of which do not add value to improving governing performance in a Policy Governance® model.

According to the article "Stand and Deliver" by Doug Eadie of the National School Boards Association published in the June 2013 edition of the American School Board Journal, "...the two pre-eminent governing streams in every organization, including school districts, are planning and performance monitoring, which are the "bread and butter" governance functions. A third, narrower stream is important, but not as critical: community and stakeholder relations. This modern committee structure has proved to be highly effective in taking the governing performance of school boards to the next level..."

In a presentation entitled "Governance Policies & Board Committees: Purpose, Performance and Practices," delivered by Tanya J. Giovanni to the North Carolina School Boards Association Policy Conference June 18–19, 2009, current best practices in designing contemporary committee structures for school boards recommend that school board committees follow four key governing functions, as outlined below:

- board operations and coordination;
- strategic and operational planning and budget preparation;
- performance oversight and monitoring; and
- external and community relations.

According to contemporary best practices, school boards can significantly improve their governing performance by reducing, rather than expanding, the number of standing committees, which allows for more board member participation in governance, planning, and performance monitoring functions that provide a foundation for continuous governance improvement. Giovanni's presentation recommends four standing committees aligned with a school board's key governing functions, which include:

- **Governance or Executive Committee** – would be responsible for planning board agendas and coordinating the work of the other standing committees.
- **Planning Committee** – would be responsible for overseeing board involvement in strategic and operational planning and preparation of the annual budget, and for reviewing and recommending key planning actions to the board.
- **Performance Monitoring Committee** – would be responsible for tracking educational and financial performance and for recommending updated operating policies to the board as appropriate.
- **External Affairs Committee** – would be responsible for overseeing the relationship with the public at large and with key people in the community.

#### **RECOMMENDATION 1-C.1**

**Redesign the board's standing and *ad hoc* committee structure to reflect contemporary best practices for organizing school board committees to improve governing performance.**

The chairperson of the board should lead the board in redesigning the board's existing committee structure, using contemporary best practices, to reflect a modern committee structure for school boards, which is essential to improving governing performance. The board should design the committee structure around key governing functions rather than traditional educational and administrative functions. Moreover, the board must consider the statutory requirements in Tennessee Code Annotated § 49-2-206, which outlines the configuration of the executive committee of the board, as well as consolidating the responsibilities of *ad hoc* committees into its standing committee structure.

The board should consider reducing the number of standing committees to five from the eight standing committees included in Board Policy GP-7. Additionally, the *ad hoc* Ethics Committee, authorized in Board Policy GP-10, Section 5 (Ethics Complaints), could be positioned in the Governance Committee and activated when necessary. The board should consider revising Board Policy GP-7 to establish the following standing committee structure:

- Executive Committee;
- Governance Committee;
- Planning & Budgeting Committee;
- Performance Monitoring & Accountability Committee; and
- Community & Stakeholder Relations Committee.

**Exhibit 1-17** depicts the proposed standing committee structure to reflect best practices, including existing *ad hoc* and standing committees that will be consolidated into the new structure.

**Exhibit 1-17  
Proposed Metropolitan Nashville Public Schools Board of Education Committee Structure**

Proposed Standing Committee	Existing Committee Consolidated into Proposed Standing Committee Structure
<b>Executive Committee</b>	Executive Committee (Required by Law)
<b>Governance Committee</b>	<ul style="list-style-type: none"> <li>• Governance (Standing)</li> <li>• Ethics (<i>ad hoc</i>)</li> </ul>
<b>Planning &amp; Budgeting Committee</b>	<ul style="list-style-type: none"> <li>• Budget and Finance (Standing)</li> <li>• Capital Needs (Standing)</li> <li>• Nondiscrimination Procurement Program (Standing)</li> </ul>
<b>Performance Monitoring &amp; Accountability Committee</b>	<ul style="list-style-type: none"> <li>• Director’s Evaluation (Standing)</li> <li>• Student Assignment Task Force (Standing)</li> <li>• Teaching &amp; Learning (<i>ad hoc</i>)</li> </ul>
<b>Community &amp; Stakeholder Relations Committee</b>	<ul style="list-style-type: none"> <li>• Advocacy (Standing)</li> <li>• Naming of Schools (<i>ad hoc</i>)</li> </ul>

Source: McConnell Jones Lanier & Murphy LLP Review Team, June 2014.

The responsibilities of each of the existing standing or *ad hoc* committees should be incorporated into the new charge of the proposed standing committee structure.

**FISCAL IMPACT**

This recommendation can be implemented with existing resources.

**OBSERVATION 1-D**

**The board does not have a complete performance dashboard to aid board members in monitoring various initiatives to improve student and operational performance that are linked to “End Results for Students” included in Board Policy E-2 and the School System’s five-year strategic plan.**

The School System has had a “district dashboard” for a year and the majority of board members were unaware of its existence because the director of Information Management and Decision Support had limited engagement from board members as it was developed. Additionally, the assistant to the director for Program Results Management corroborated this fact, indicating the School System provided the board with a school board dashboard developed in collaboration with board members and the School System’s data warehouse team. Moreover, the data warehouse team invited all board members to participate in the requirements sessions to design the components of the dashboard, but a majority of the board members did not participate in the sessions. Accordingly, the school board dashboard is incomplete and contains “too much data.” The School System is in the process of refining the data included in the school board dashboard.

Without a complete performance dashboard, the board cannot efficiently view and analyze student achievement, financial and operational performance data necessary to successfully accomplish the essential governance function of performance monitoring. Moreover, without performance dashboards that display metrics and key performance indicators for various initiatives, board members lack the

transparency necessary to ask members of the executive leadership team incisive questions related to actual versus expected performance in board work sessions.

A performance dashboard is a dynamic management tool that is used by an organization to gauge performance and progress toward specific goals. Typically, the dashboard is a one-page management tool updated several times throughout the year and its metrics may cover several functions within the organization, including operations, finance, and instruction. School board members use dashboards for viewing and analyzing student achievement and performance data in addition to operational performance data. A dashboard can provide timely data to board members so they can monitor program and operational performance, identify problems in real time, and make informed policy decisions.

#### **RECOMMENDATION 1-D.1**

**Complete the design of the board’s performance dashboard to provide board members with a tool to monitor the initiatives related to student achievement and administrative, financial, and operational performance.**

The chairperson of the board should task the director of schools with assembling key members of the data warehouse team to devote a series of work sessions to working collaboratively with board members to complete the design of the board’s performance dashboard to aid them in monitoring the various initiatives currently underway in the School System. Board members should work with the data warehouse team to leverage information stored in the School System’s data warehouse to develop key performance indicators and metrics necessary to conduct their performance monitoring activities. Sample metrics are outlined in the Performance Accountability Systems Chapter of this report (Chapter 12). The data warehouse is a centralized repository for pertinent student, financial, and operational system data that can be easily accessed and manipulated for analytical and reporting purposes.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

#### **OBSERVATION 1-E**

**Four of the nine board members expressed concern about the School System’s lack of responsiveness to complaints and requests from their constituents.**

Although the School System has a process for receiving, tracking, resolving, and communicating the resolution of complaints to stakeholders (which include constituents in board members’ respective districts), several complaints have reached board members, which some board members believe is the result of ineffective communication and follow-up with their constituents. Moreover, one board member felt the board did not have a process to ensure that complaints from constituents are resolved timely.

A failure to provide swift resolution to complaints, or a failure to communicate to stakeholders the status of their complaints results in constituents taking their complaints directly to board members, who may or may not know a complaint has been registered with the School System. This potential “process gap” frustrates some board members because, as elected officials, they feel they have an obligation to see to it that the School System responds to and resolves their constituents’ complaints in a reasonable period of time, all the while communicating updates of the status of the complaint to constituents until the matter is resolved.

The School System has a commendable Customer Service Center in which Customer Service staff receive unresolved complaints, create an electronic record of each complaint, assign a tracking number to the complaint, forward the complaint to the appropriate authority within the system (such as lead principals and members of the executive leadership team), and continuously track and communicate the status of the complaint to board members' constituents. However, the board wants to fill the vacant position for a "board administrator," who would handle constituent communications to make sure constituent issues brought to board members are resolved or communicated back to them as "unresolved" with a reason why they could not be resolved. Further, one board member suggested revisions to Board Policy EE-3, Treatment of Parents, Students and Citizens, that outlined a process for specifically handling "constituent matters," including target response times for: 1) acknowledging the referring board member(s) receipt of the matter; 2) determining the action steps for addressing the matter, and advising the referring board member(s) on the proposed action steps; and 3) resolving the matter, declaring it unresolvable, and providing a written response to the referring board member(s) explaining the disposition of the matter, including articulating the relevant board or administrative policies factoring into any decision(s). The governance committee referred the suggested revisions to the director of schools to work with the assistant to the director of schools for Communications (who is responsible for the Customer Service Center) to recommend to the board potential revisions to Board Policy EE-3 after considering the board member's suggested revisions and bring a revised policy to the board for adoption. At the time of this writing, the director of schools and the assistant to the director of schools for Communications were drafting revisions to Board Policy EE-3 to submit to the governance committee.

Also, during the review team's on-site interviews, the director of schools was in the process of hiring an individual to specifically handle and manage constituent matters submitted by members of the board. According to the assistant to the director of schools for Program Results Management, this individual's role is specifically responsible for ensuring that school board members' constituent complaints "feed completely through the resolution and response loop, and keep the school board member who submitted the issue well-informed of the progress and/or resolution."

#### **RECOMMENDATION 1-E.1**

##### **Modify existing processes within the Customer Service Center to establish a specific tracking, monitoring, and reporting protocol for handling board members' referrals of constituent matters.**

The director of schools should collaborate with the assistant to the director of schools for Communications to establish specific tracking, monitoring, and reporting protocols within the School System's Customer Service Center to handle constituent matters referred by board members. The Customer Service Center already has a system for receiving, managing, and tracking stakeholder complaints that it could "fine-tune" to incorporate specific protocols to significantly improve the responsiveness to board members' constituent matters, and resultant communication of the ultimate resolution of the matter back to the referring board member in a reasonable time frame. These protocols should include the following:

- dedicated system "prompts" to identify constituent matters referred to the director of schools by board members;
- prioritized communication tree designating the persons to notify, via electronic email that the Customer Service Center received the matter, and the time and date received. This communication tree should include the referring board member, the director of schools, the name of the executive

leading the department responsible for resolving the matter, and the constituent who brought the matter to the referring board member;

- specific time frames for responding to the referring board member acknowledging receipt of the matter, notifying them of actions taken, and resolving the matter; and
- specific communication intervals to notify persons included in the communication tree of the status of their matter if it is not immediately resolved.

If the Customer Service Center successfully implements these specific tracking, monitoring, and reporting protocols, and they meet the expectations of board members, an additional resource dedicated to board members' constituent matters will not be necessary.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

## **PLANNING**

Planning is essential to effective school system management. Proper planning establishes a mission and identifies goals and objectives, sets priorities, identifies ways to complete the mission, and determines performance measures and benchmarks to achieve goals and objectives. In its purest sense, planning anticipates the effect of decisions, indicates possible financial consequences of alternatives, focuses on educational programs and methods of support, and links student achievement to the cost of education.

*Education 2018: Excellence for Every Student* (Education 2018) is the School System’s comprehensive five-year strategic plan that the director of schools and executive leadership team created in collaboration with the board and the stakeholders. According to the overview of the strategic plan included in the executive summary of the strategic plan the director of schools presented to the board, the stakeholders who provided input for the plan included students, parents, teachers, coaches, principals, staff, and community partners.

The strategic plan originated with the comprehensive reform efforts initiated by the director of schools in May 2009 through Metropolitan Nashville Public Schools Achieves, with the Transformational Leadership Groups formed to review best practices, conduct research, and develop reform proposals for the School System. Additionally, the School System was awarded \$30,300,000 in Race to the Top funding in March 2010, and initiated a six-step process to apply for a second round of Race to the Top funding in November 2012. Although the School System did not receive a second round of Race to the Top funding, the research, analysis, and collaboration involved with preparing the Race to the Top grant submission for the second round of funding served as the foundation for the strategic plan. **Exhibit 1-18** presents a summary of the six-step process the School System used to prepare the 2012 Race to the Top grant application, which serves as the basis for developing Education 2018.

**Exhibit 1-18**  
**Six-Step Process Metropolitan Nashville Public Schools**  
**Used to Apply for Second Round Race to the Top Grant Funding**

Step	Activity/Task
<b>Step 1</b>	Submitted first application for Race to the Top grant funding and consulted with network lead principals to determine what the School System wanted to achieve in its schools.
<b>Step 2</b>	Assembled a research and assessment team to collect “raw data” to obtain a systemwide view of successful and struggling schools based on specific benchmarks.
<b>Step 3</b>	Assembled two teacher focus groups to determine which techniques work in schools and obtain their input and ideas related to student achievement, school management, and central office support.
<b>Step 4</b>	Conducted parent and student focus groups to obtain their input and ideas related to student achievement, parental involvement, School System initiatives.
<b>Step 5</b>	Assembled leaders from all central office departments to obtain their input and ideas related to their respective roles supporting the schools. Also, included input from the Nashville Chamber of Commerce and business community obtained through the Leadership and Learning Department as a result of collaboration on initiatives to prepare high school students for college.
<b>Step 6</b>	Used data and information gathered from focus groups and meetings to develop and submit a Race to the Top grant application in November 2012.

Source: McConnell Jones Lanier & Murphy LPP Review Team’s interview notes, February 2014.

Using the Race to the Top 2012 Grant application process as its foundation, the School System assembled members of the executive leadership team and, based on evidence gathered from reform efforts underway since 2009, the School System reviewed its vision, mission, values, and beliefs, and developed a comprehensive strategic plan with strategies and objectives based on a “Theory of System Change.”

**Exhibit 1-19** presents the School Systems’ vision, mission, and beliefs which are incorporated into the goals, objectives, and strategies included in Education 2018.

**Exhibit 1-19**  
**Education 2018: Excellence for Every Student, 2013–2018**  
**Vision, Mission & Beliefs**

<b>Vision</b>	<ul style="list-style-type: none"> <li>• Metropolitan Nashville Public Schools will provide every student with the foundation of knowledge, skills, and character necessary to excel in higher education, work, and life.</li> <li>• We embrace and value a diverse student population and community. Different perspectives and background form the cornerstone of our strong public education system.</li> </ul>
<b>Mission</b>	<ul style="list-style-type: none"> <li>• Provide an excellent teacher in every class, for every student, every year.</li> <li>• Ensure that school leadership is focused on high student achievement and cultivates an environment that produces excellence for a diverse student body.</li> <li>• Build and sustain effective and efficient systems to support finances, operations, and the academic and personal growth of students.</li> <li>• Engage all families, recognizing the power and responsibility of parents and caregivers to drive success for students.</li> <li>• Strengthen connections with the entire community to support all areas of student growth.</li> </ul>
<b>Beliefs</b>	<ul style="list-style-type: none"> <li>• All students bring unique cultural backgrounds, learning styles, abilities, interests, and social and health needs.</li> <li>• Each student can achieve at high levels, exceeding national standards.</li> <li>• Quality school staff is essential to academic excellence.</li> <li>• Consistent and sustained leadership ensures results are achieved and proven strategies can take hold.</li> <li>• Professional development must be sustained, clear, and consistently focused on quality instruction.</li> <li>• Families and community organizations must be partners in meeting our goals.</li> <li>• Each person in the School System is responsible for working toward this vision.</li> <li>• Effective, two-way communication with parents and other stakeholders is essential.</li> <li>• Transparency and accountability must be valued and practiced.</li> </ul>

*Source: Metropolitan Nashville Public Schools’ Website, June 2014.*

Coupled with the School System’s vision, mission, and beliefs, the Theory of System Change is embedded into the concept of personalizing learning experiences for all students (which serves as the “lever of change”) “so they can grow, achieve, and be empowered, leading to student success in college, career and life.” **Exhibit 1-20** presents the Grow, Achieve, and Empower goals by 2018 that are included in Education 2018: Excellence for Every Student.

**Exhibit 1-20**  
**Metropolitan Nashville Public Schools Strategic Plan, 2013–2018**  
**Grow, Achieve, and Empower Goals for 2018**

Goals Included in Education 2018: Excellence for Every Student		
GROW Goals	ACHIEVE Goals	EMPOWER Goals
<ul style="list-style-type: none"> <li>60 percent of students will advance at least one achievement level on annual state assessments.</li> <li>59 percent of students will meet, or exceed, their peers statewide in academic growth on annual state assessments.</li> <li>Student ratings of their sense of belonging and connection to school will increase annually.</li> <li>Student ratings of their self-awareness, self-management, social awareness, relationship skills, and responsible decision-making will increase annually.</li> </ul>	<ul style="list-style-type: none"> <li>71 percent of students will be proficient or advanced on annual state assessments.</li> <li>40 percent of elementary and middle school students will project to score a 21 or higher on the ACT.</li> <li>50 percent of high school students will score 21 or higher on the ACT composite (or 990 on the SAT).</li> <li>75 percent of high school students will be enrolled in at least one course for college credit, 100 percent of enrolled students will take associated exams, and 75 percent will pass the exam.</li> <li>88 percent of high school students will graduate within four years plus one summer. 100 percent will complete a capstone experience.</li> </ul>	<ul style="list-style-type: none"> <li>The percentage of students rating their school learning experiences positively increases annually.</li> <li>The percentage of students and families rating their school's program favorably will significantly increase from 2014-2015.</li> <li>100 percent of K-12 students will demonstrate leadership skills, as measured by school-level evaluation rubrics.</li> <li>100 percent of students will set learning goals and track their own learning progress.</li> </ul>

*Source: Education 2018: Excellence for Every Student, presented to the Board of Education August 27, 2013 and revised January 2014.*

To implement the Theory of System Change, the strategic planning team organized the goals and objectives in the plan around three distinct strategies to achieve specific goals for student performance and system performance. These three strategies include: 1) quality teaching; 2) equity and excellence; and 3) transformational leadership, which outline three specific objectives for each strategy that are linked to the student and system performance goal categories of Grow, Achieve, and Empower.

**Exhibit 1-21** presents a summary of the Theory of System Change concept imbedded into the strategic plan.

**Exhibit 1-21  
Metropolitan Nashville Public Schools Strategic Plan, 2013–2018  
Theory of System Change Concept**

Theory of System Change				
EDUCATION	2018	Strategy 1 Quality Teaching	Strategy 2 Equity & Excellence	Strategy 3 Transformational Leadership
Lever of Change:  Personalized Learning Learning experiences that strengthen relationships, value every learner, raise expectations for learning and customize content and instruction to meet learners' diverse needs, interests, and strengths.	<b>Objectives</b>			
	<b>GROW</b> Are all students <i>growing</i> academically, socially, and emotionally every year?	<b>Grow Objective G1.1</b> Transform teaching and learning using personalized approaches that meet the unique strengths, needs, and interests of every learner.	<b>Grow Objective G2.1</b> Direct resources and supports to the specific needs of learners.	<b>Grow Objective G3.1</b> Increase principal and teacher autonomy and accountability for leading and managing academic and cultural change.
	<b>ACHIEVE</b> Are all students <i>achieving</i> high academic standards?	<b>Achieve Objective A1.2</b> Continuously increase the rigor and relevance of learning content and experiences for every learner.	<b>Achieve Objective A2.2</b> Expand all students' access to relevant learning content, resources and opportunities, in and out of school time.	<b>Achieve Objective A3.2</b> Create a culture of continuous improvement focused on high expectations for every learner.
	<b>EMPOWER</b> Are all students <i>empowered</i> by having voice, choice, and ownership in their learning experiences?	<b>Empower Objective E1.3</b> Empower learners with knowledge and support to create learning goals and frequently monitor progress.	<b>Empower Objective E2.3</b> Maximize and leverage parent and community partnerships to ensure shared accountability for student outcomes.	<b>Empower Objective E3.3</b> Expand opportunities for students, parents, and teachers to use their talents, skills and experiences to accelerate school improvement.
<b>Support for Schools:</b> Knowledge Base; Systems & Operations    Accountability for Results; School Performance; System Performance <b>Educational Support System</b> <i>"We believe when we <b>personalize learning</b>, our students will grow, achieve, and be empowered, leading to student success in college, career, and life."</i>				

Source: Adapted from *Education 2018: Excellence for Every Student*, presented to the Metropolitan Nashville Public Schools Board on August 27, 2013.

School System performance goals include school academic performance, equity and diversity, and establishing and sustaining a collaborative culture through an educational support system that demands accountability for results.

The School System used the strategic planning framework to seamlessly link and measure outcomes developed for each instructional and support department to performance goals and objectives, for the three strategies included in the strategic plan. Moreover, the School System uses Education 2018 to annually prioritize the allocation of budget resources to achieve student performance and system performance goals outlined in the plan.

#### **OBSERVATION 1-F**

**Some board members reported they did not participate in the visioning or stakeholder engagement processes when the director of schools and executive leadership team developed the School System's five-year strategic plan.**

Although the majority of board members applauded the strategic plan, with one member saying it was "excellent," some board members reported that the executive leadership team initiated and managed the entire strategic planning process without conducting a visioning session with the board. Four of the nine board members commented that the board was involved in the strategic planning process only to the extent that the director and executive leadership team provided updates to the board throughout the process and asked board members for feedback during board work sessions.

Upon further investigation and discussions with members of the executive leadership team, specifically the assistant to the director for Program Results Management, the visioning process and foundation for the School System's strategic plan has continuously evolved, dating back to 2009 when the director of schools began his tenure. During 2009, the board contracted with the Collaborative Communications Group to engage the school board and other stakeholders within the Nashville community to develop the School System's Vision, Mission and Beliefs statement. The board unanimously approved the Vision, Mission and Beliefs in its August 11, 2009 meeting with an 8-0 vote. Over the next four years, the executive leadership team, using the School System's Vision, Mission and Beliefs as its foundation, obtained formal and informal feedback from board members. They obtained this feedback in meetings, work sessions, and discussions related to the director of schools' evaluation to develop strategic initiatives for the School System's application for Race to the Top grant funding from the U. S. Department of Education.

When new board members took office in August 2012, the director of schools scheduled a retreat for September 13-14, 2012, at which time the board reviewed and discussed the School System's Vision, Mission and Beliefs, as well as the Theory of Action which is an essential part of the foundation for Education 2018. The new board members did not suggest any changes to the Vision, Mission and Beliefs, and the director of schools informed the board of strategic initiatives included in the School System's Race to the Top grant application, which served as the foundation for Education 2018. While there has been no formal visioning session, the director of schools has solicited feedback from the board during the strategic planning process culminating in the board unanimously approving Education 2018 in its September 10, 2013 board meeting.

While there appears to be a disconnect or misinterpretation by some board members of “being engaged in the visioning process” it is important for board members to participate in a visioning session at the beginning of the strategic planning process. This element of the strategic planning process is preferred so that the entire board and director of schools can develop a shared vision that is typically used to chart a long-term course for the School System. The board and director of schools missed an opportunity to become a more cohesive team by foregoing a visioning session at the inception of the strategic planning process. For example, four new members joined the board after the August 2012 school board elections and could have provided fresh perspectives to be considered by the board and director of schools through a “team-oriented” visioning process that typically yields a shared vision.

Four of the current board seats will be up for re-election in August 2014, and the board could experience significant turnover. One board member has already decided not to seek re-election, and three other seats are contested. Additionally, the director of schools is in the final year of his contract, which expires in June 2015. These factors will require the board and director of schools to revisit the strategic plan to be sure the newly configured board continues to share the long-term vision for the School System and collectively “buy-in” to the goals, objectives, and strategies included in Education 2018.

#### **RECOMMENDATION 1-F.1**

**Conduct a strategic planning retreat to re-engage the board in the strategic planning process to review the goals, objectives, and strategies included in Education 2018: Excellence for Every Student.**

The board chairperson should schedule a strategic planning retreat in 2015, after the new board is in place and after the appointment of a new director of schools, to review the goals, objectives, and strategies included in Education 2018. This retreat should have as its purpose to “re-engage” the board and the newly appointed director of schools in the strategic planning process given the turnover in two board seats resulting in a newly configured board, and the transition to new leadership in July 2015.

Given the tremendous progress the School System has made with multiple reform initiatives, it is critical that the newly configured board and newly appointed director of schools move forward with a shared vision for the long-term direction of the School System. More significantly, the strategic planning retreat will allow the newly configured board and newly appointed director of schools to revisit the goals, objectives, and strategies included in the current strategic plan because board members and the director of schools were collectively engaged in the process to review the current strategic plan and potentially agree to a shared vision.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources, as the board chairperson would lead the retreat.

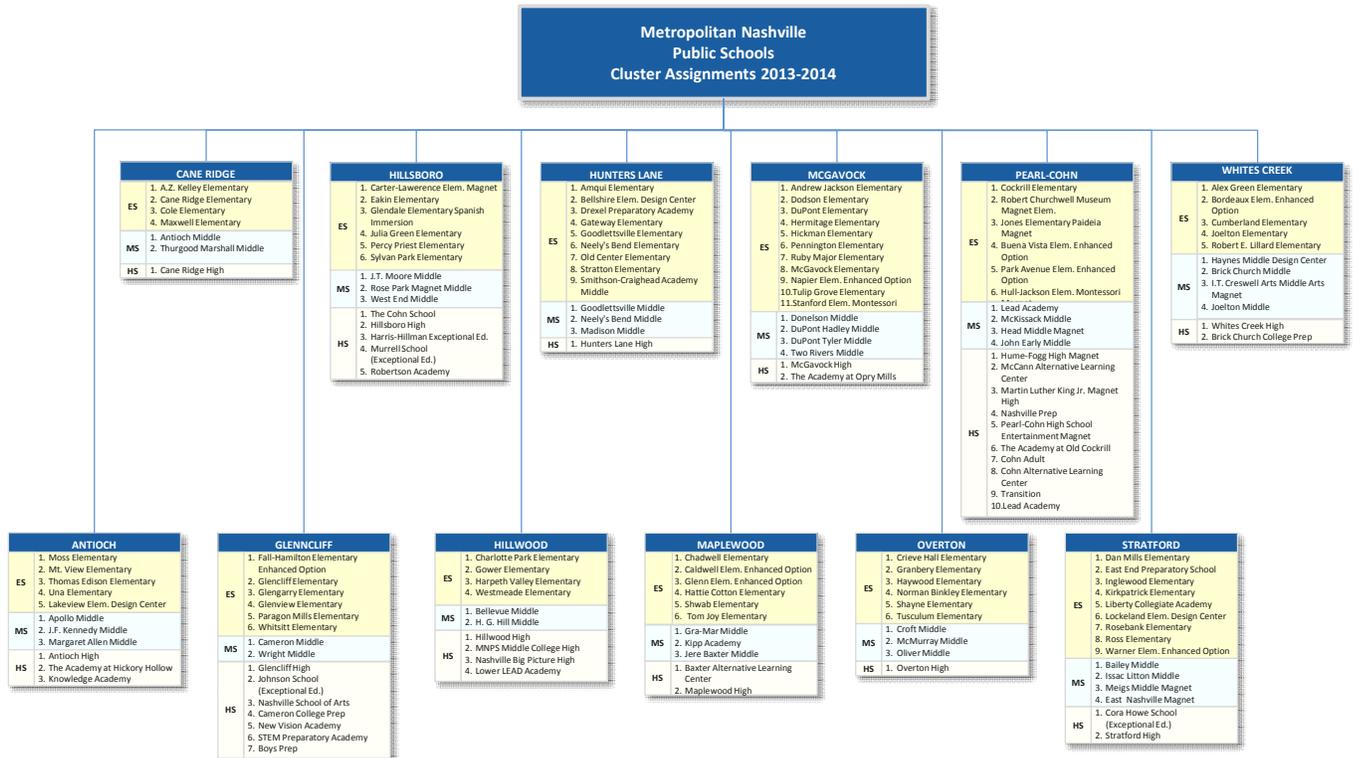
#### **DISTRICT MANAGEMENT**

Dr. Jesse Register has served as the director of schools since January 15, 2009, and is the chief executive officer of the School System. The director of schools’ executive leadership team is responsible for day-to-day operations and administration. The executive leadership team functions as the director of schools’ cabinet and includes the chief financial officer, chief operating officer, chief academic officer, chief human capital officer, chief support services officer, assistant to the director for Communications, assistant to the

director for Strategic Planning & Management, and the assistant to the director for Program Results Management.

The School System organizes all schools into 12 clusters, representing feeder patterns and school zones which are essential to the assigned students. Each cluster is in a specific geographical area within the system and includes elementary and middle schools that feed into the high school assigned to that particular cluster. **Exhibit 1-22** graphically depicts the organization of the School System’s clusters.

**Exhibit 1-22**  
**Metropolitan Nashville Public Schools' Cluster, 2013–2014**



Source: Metropolitan Nashville Public Schools’ Website, June 2014.

The director of schools meets with the executive leadership team each Monday at 8:30 a.m. Members of the executive leadership team notify the director of schools’ executive assistant of items they wish to discuss with the team in the Monday meetings that are in addition to items the director of schools has placed on the agenda. The executive assistant prepares the agenda and related supporting information, and distributes a packet for the meeting to each member of the executive leadership team each Friday afternoon.

Executive leadership team meetings typically last three and one-half hours and include extensive discussions of issues and strategies affecting administration and operation of the School System, the issuance of directives by the director of schools, status reports by executive leadership team members, and reviewing potential questions and answers for regular board meetings and work sessions.

The director of schools is a good listener and encourages open, candid dialogue in the executive leadership team meetings. He has a participative management style in which he delegates authority to members of his executive leadership team and holds them accountable for results. Hence, the director of schools supports and coaches members of his executive leadership team, allows them to disagree with him and express their concerns on particular issues, and encourages them to resolve conflicts with each other without his intervention.

#### **OBSERVATION 1-G**

##### **Members of the executive leadership team do not consistently communicate key messages, initiatives, and directives to the broader leadership at the central office staff and school levels.**

The common theme from interviews with members of the executive leadership team and principals is that communication is not consistent and the schools are often unaware of basic initiatives agreed to by the executive leadership team. For example, the majority of principals in the elementary school principals' focus group were unaware of the School System's pilot program with network lead principals' schools and innovation schools, initiated with 17 schools in 2013-2014, to phase in full autonomy and school-based budgeting for principals in all schools in the system by 2015-2016.

The assistant to the director of Schools for Communications created a weekly key messages list and sent the document to the executive leadership team each Monday afternoon after the executive leadership team meeting. Entitled "Key Messages," the document provided concise information on current and anticipated news topics, public discussions, and new programs that were discussed in executive leadership team meetings. The assistant to the director for Communications reported that many of the members of the executive leadership team shared this information with others in their respective divisions.

Despite efforts to provide a vehicle to communicate key messages from executive leadership team members, some members still cited communicating decisions down through the management and administrative levels of the School System has a significant weakness requiring immediate attention. This communication deficit contributes to confusion among members of the central office staff, school leadership, and teachers because they often learn of decisions made within the executive leadership team meetings through indirect channels, rather than from a coordinated, cohesive communication effort at the executive level of the School System. The indirect communication channels include colleagues in the central office who may know members of the executive leadership team, fellow principals who may have heard about initiatives in conversation with other principals, or in meetings with teachers after a central office department has begun implementation of the initiative or directive.

In an effort to improve the communication of decisions, directives, and key messages from the executive leadership team, the director of schools pledged to initiate more "direct communication" with teachers about specific issues and initiatives approved in the executive leadership team meetings via e-mail. Further, he has directed the assistant to the director of schools for Communications to develop an internal communications plan to improve the communication of key messages, initiatives, and directives originating within the executive leadership team.

The Council of the Great City Schools, in its publication *Building Public Confidence in Urban Schools: It Begins Inside the District, A Guide for Administrators and Board Members [2009-2010]*, says all school district leaders are responsible for communicating with employees. It goes further to say that school district leaders should “build leadership” by recognizing the need for internal communication and consider the following:

- keeping managers, supervisors, and principals informed so that they can disseminate information to their employees and teachers, respectively; and
- conducting scheduled meetings with employees by the director of schools, senior, and middle management.

The publication also suggests developing strategies and tactics to “build bridges” to all segments of the organization, which would significantly improve communications from the executive leadership team to employees throughout the School System.

### **RECOMMENDATION 1-G.1**

**Develop specific strategies and tactics to include in the School System’s internal communications plan to communicate key messages, initiatives, and directives from the executive leadership team meetings to the employees throughout the system.**

The assistant to the director of schools for Communications should develop specific strategies and tactics to include in the internal communications plan she is responsible for developing for the executive leadership team. These strategies and tactics should recognize the importance of clear, concise, coordinated communication of key messages and initiatives promulgated by the executive leadership team. The Council of the Great City Schools recommends the following strategies and tactics that should be included in the plan:

- developing a consistent electronic communications vehicle to keep managers, supervisors, and principals informed, such as a weekly fact sheet detailing initiatives and directives from executive leadership team meetings;
- conducting periodically, scheduled meetings between employees (teachers and staff) and the director of schools and members of the executive leadership team, including principals, middle managers and supervisors within their respective functions;
- developing an employee opinion survey to determine through which communication tools employees desire or prefer to be informed about issues from the executive leadership to enable them to buy into the system;
- refining and improving existing communication vehicles used to disseminate information to employees, including newsletters, e-mails, and telephone messaging;
- creating a “communications toolkit” for principals and managers that include key messages to be shared when describing a major initiative from the executive leadership team, memo templates for use in communicating with staff, principals, and teachers, and talking points for staff meetings; and

- convening a standing internal communications advisory group consisting of executive and network lead principals, school principals, central office management, staff, teachers and the assistant to the director of schools for Communications.

### **FISCAL IMPACT**

This School System can implement this recommendation with existing resources.

### **OBSERVATION 1-H**

#### **Relationship-based “silos” continue to exist among members of the executive leadership team that hinder collaboration between functions, which contributes to tension between team members.**

Interviews with members of the executive leadership team revealed the existence of underlying tension between certain members of the executive leadership team that affects the collaborative working relationship between departments in the central office. Limited collaboration between central office departments contributes to disjointed, ineffective support for schools throughout the School System.

While members of executive leadership teams said during interviews that discussions in executive leadership team meetings are candid and free-flowing, most acknowledged the free-flow of information is not consistent and does not allow the team to thoroughly deliberate issues. In fact, some members of the team felt their colleagues were sometimes “guarded” in sharing information. More significantly, members of the executive leadership team all cited the primary driver of conflict was attributed to member’s venturing into another members functional area, which is “outside their lane.” When this occurs, the director of schools encourages individual members of the executive leadership team to resolve problems among themselves.

The director of schools recognizes the group dynamic within the executive leadership is a work in progress and he hired a consultant specializing in group dynamics to conduct periodic leadership development retreats to improve the leadership and conflict resolution skills of members of the executive leadership team. One of the retreats specifically addressed “silos, turf, and politics,” all of which could render collaboration between team members and their respective departments ineffective, potentially weakening the relationship between the schools and the central office.

Survey results corroborate the problems with collaboration in the central office, which appears to emanate from the executive leadership team. **Exhibit 1-23** presents the results of survey questions related to the central administration.

**Exhibit 1-23  
District Organization and Management Survey Results  
Central Administration**

Question		Percentage Responses				
A5. Central administration is efficient.	Number of Survey Respondents	Agree or Strongly Agree	Somewhat Agree	Disagree or Strongly Disagree	N/A	Total
<b>Survey Group</b>						
Central Administrators	62	48%	34%	16%	2%	100%
Principals/Assistant Principals	104	48%	38%	13%	1%	100%
Support Staff	438	31%	34%	34%	2%	100%
Teachers	1,208	23%	33%	40%	4%	100%

Question		Percentage Responses				
A6. Central administration supports the education process.	Number of Survey Respondents	Agree or Strongly Agree	Somewhat Agree	Disagree or Strongly Disagree	N/A	Total
<b>Survey Group</b>						
Central Administrators	62	71%	21%	5%	3%	100%
Principals/Assistant Principals	104	68%	25%	7%	0%	100%
Support Staff	438	42%	33%	22%	3%	100%
Teachers	1,208	30%	34%	31%	5%	101%

**Exhibit 1-23  
District Organization and Management Survey Results  
Central Administration (Cont'd)**

Question		Percentage Responses				
A7. The morale of central administration staff is good.	Number of Survey Respondents	Agree or Strongly Agree	Somewhat Agree	Disagree or Strongly Disagree	N/A	Total
<b>Survey Group</b>						
Central Administrators	62	52%	19%	27%	2%	100%
Principals/Assistant Principals	104	0%	0%	0%	0%	0%
Support Staff	438	30%	30%	24%	16%	100%
Teachers	1,208	0%	0%	0%	0%	0%

Source: McConnell Jones Lanier & Murphy LLP Surveys of Central Administrators, Principal/Assistant Principals, Support Staff, and Teachers, May 2014.

Less than 50 percent of central administrators and principals and assistant principals agree or strongly agree that central administration is efficient, while 31 percent and 23 percent of support staff and teachers, respectively, agree or strongly agree that central administration is efficient. Moreover, while 52 percent of central administrators agree or strongly agree that the morale of central administration staff is good, support staff reports a strikingly different response. Only 30 percent of support staff agree or strongly agree their morale is good. Principals and teachers did not have the survey question about morale.

Principals participating in the focus groups have a strikingly different view of central administration than principals responding to the survey. Most principals agreed they get “conflicting directives from different departments” because central administrators are the victims of silo communication in the central office,

which as the elementary principals put it, “gives us a sense that the left hand does not know what the right hand is doing.”

It is important to note that the three evaluation reports on Metropolitan Nashville Public Schools Achieves and the Inspirational Schools Partnership report cited slight improvements in communication and collaboration between central office departments and schools; however, both reports concluded collaboration continues to be a challenge within the School System.

#### **RECOMMENDATION 1-H.1**

##### **Integrate teambuilding retreats into the cycle of periodic leadership development retreats scheduled for the executive leadership team to enhance relationship-building and collaboration.**

The director of schools should add team-building retreats to the cycle of leadership development retreats to address the challenges with collaboration between members that extends to their respective departments. The only way to improve “soft skills” related to building and sustaining productive relationships is to continue to reinforce the concepts of cross-collaboration through open communication among members of the executive leadership team. Individual team members will get to know each other’s characteristics in a group setting and will learn how to leverage the unique characteristics of each member of the team to improve their relationship and create a more collaborative environment. The School System can implement this recommendation with existing resources.

### **SCHOOL MANAGEMENT**

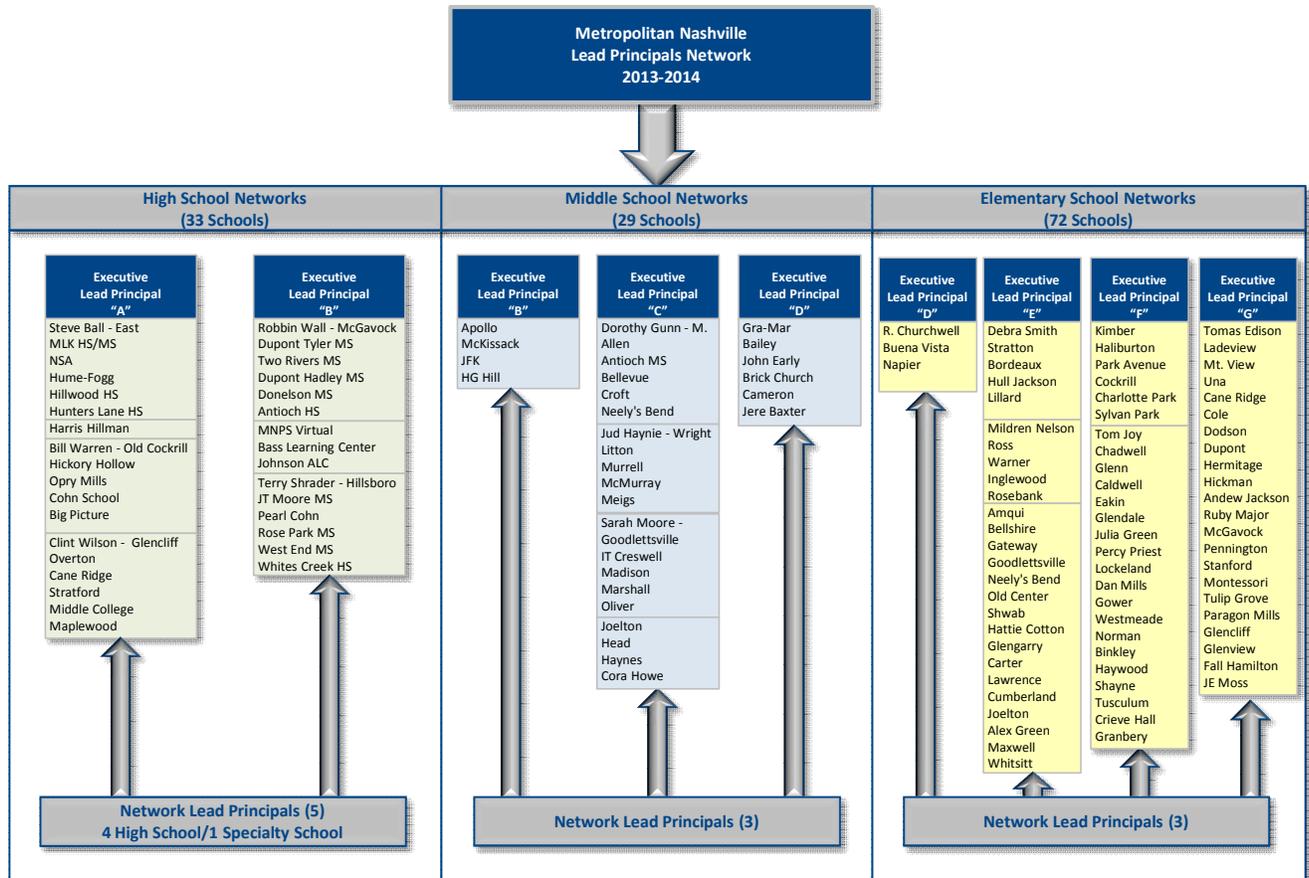
Effective schools meet the needs of communities they serve. Population diversity, economic, and ethnic backgrounds of the students, special service requirements, and adequacy of facilities, staffing resources, and instructional priorities of the community, all contribute to shaping the unique organization of each school.

School management is at the vanguard of student performance and the success or failure of students is dependent on the extent to which schools can perform their core functions. These core functions include quality curriculum and instruction, management of instructional and support staff resources, effective building management, safety and security, discipline management, parental involvement, and community relations. With sufficient autonomy, ownership, and staffing and budget flexibility, principals can effectively manage their schools to achieve the goals and objectives of school systems.

The School System manages principals through the Office of the Chief Academic Officer, Leadership and Learning Department, with seven executive lead principals who report to the executive officer for elementary schools, and to the chief academic officer who also serves as the executive officer for secondary schools, which includes middle and high schools. The seven executive lead principals oversee a network of 11 lead principals who “mentor” elementary, middle, and high school principals throughout the system.

**Exhibit 1-24** graphically depicts this “network of lead principals” as configured for 2013–2014.

**Exhibit 1-24**  
**Metropolitan Nashville Public Schools, Lead Principals Network**  
**2013-2014**



Source: Metropolitan Nashville Public Schools, Leadership and Learning Department, June 2014.

**OBSERVATION 1-I**

**The format of monthly principals meetings with the executive officers for elementary and secondary schools does not allow for interactive discussion or dialogue.**

Secondary principals bemoaned the format of the meeting as one that does not encourage two-way dialogue between the principals and executive officers. Principals commented that, in a typical principals' meeting, they usually listen to the executive officers discuss system initiatives, directives, or updates, with no opportunity to participate in an interactive discussion to share their views. Most perceived the principals meeting format to be symptomatic of central administrators making decisions affecting schools without obtaining input from principals who are on the front lines.

Conducting principals meetings without providing principals an opportunity to thoroughly discuss issues, initiatives, or directives that could potentially affect how they manage their schools does not give them a voice in shaping decisions from central administrators that could impact student achievement or basic building operations. Failure to consistently obtain feedback from principals entrusted to provide instructional leadership, discipline management, and school operations management could erode principals' trust in central administrators and result in missed opportunities to increase and sustain student achievement.

#### **RECOMMENDATION 1-I.1**

##### **Revise the format for monthly principals meetings to allocate time to obtain feedback from principals through two-way dialogue with the executive officers for elementary and secondary schools.**

The chief academic officer, who also serves as the executive officer for secondary schools, should revise the format of monthly principals meetings to provide opportunities to receive feedback from principals related to various system initiatives, directives, and updates affecting schools. The format of the meetings should be flexible and thoughtfully considered based on input from principals to determine how they would like to provide feedback. The executive officers for elementary and secondary education should solicit this input from principals in a targeted survey.

The format should consider, at a minimum, the following suggested revisions:

- allocating time to conduct a principals' roundtable discussion, with rotating principals as participants, to discuss upcoming initiatives and directives and answer questions;
- allocating a block of time for constructive dialogue at each meeting, with one principal from each level designated to lead discussions related to specific initiatives; and
- devoting "timed segments" to a "principals town hall meeting" in at least one meeting each quarter to have interactive dialogue between principals and the executive officers or selected central administrators presenting initiatives or directives affecting schools.

#### **FISCAL IMPACT**

The School System can implement this recommendation with existing resources.

#### **OBSERVATION 1-J**

##### **The current principal evaluation process requires network lead principals to evaluate the principals they are coaching and mentoring in their respective networks, who are their peers.**

The principal evaluation process is an integral part of the School System's school accountability and transparency initiative included in the system's long-term strategic plan. However, elementary and high school network lead principals confirmed in focus group sessions that they prefer not to evaluate their peers, and most participants felt "uncomfortable" in the role of evaluating their peers. One network lead principal said: "...I prefer to be there for my peer to provide support as your coach rather than your evaluator..."

Elementary school network lead principals felt their peer-to-peer evaluations tended to score higher than evaluations conducted by executive lead principals who reside in the Leadership and Learning Department in the central office rather than in schools. The executive lead principals agreed with the sentiment of elementary and high school network lead principals, suggesting that network lead principals should not evaluate building principals, as they are peers. Moreover, executive lead principals were resolute in their belief that executive lead principals should prepare the evaluations of building principals with network lead principals providing “formative” information as input for the evaluations.

Experiences of members of the National Federation of Independent Business, like Tom Armour, co-founder of Toronto-based High Return Selection, a company specializing in hiring, performance, and retention for organizations in North America and Europe, show peer-to-peer evaluations tend to sometimes be uncomfortable because employees tend to form relationships in small communities with their peers. When peer-to-peer evaluations force colleagues on the same level to review and evaluate each other’s performance, it sometimes compromises objectivity, leading to less than candid evaluations, which do not contribute to the professional development of the employee evaluated.

#### **RECOMMENDATION 1-J.1**

**Modify the evaluation process for principals to require executive lead principals to conduct annual performance evaluations for building principals with input from network lead principals.**

The chief academic officer should work with the chief human capital officer to modify the current peer-to-peer evaluation process, by requiring executive lead principals to conduct performance evaluations for building principals. Requiring executive lead principals to conduct these evaluations would allow network lead principals to focus more on supporting and coaching their peers, rather than the discomfort some currently experience preparing evaluations of their colleagues. Further, modifying the current peer-to-peer evaluation process will enable the building principals to grow professionally and personally from candid evaluations prepared collaboratively with the executive lead principals.

#### **FISCAL IMPACT**

The School System can implement this recommendation with existing resources.

#### **OBSERVATION 1-K**

**The School System’s central office has not effectively communicated the common calendar of meetings and events that principals must attend throughout the month and annually.**

Principals cited the absence of “pre-planning” in the central office as the primary factor that causes them to be away from their schools frequently each month. Participants in each focus group characterized the central office as reactive rather than proactive, often sending email communications about mandatory meetings in the central office or at locations away from schools at the last minute.

Upon further investigation of the comments recorded from participants in the principals' focus groups about the absence of central office administrators pre-planning and scheduling meeting at the last minute, there is evidence that the School System has published an internal and external event calendar on its website for a number of years. The Communications Department provided individual central office departments and members of the executive leadership team instructions on how to use the calendar to disseminate to employees throughout the School System. Based on comments from the respective focus groups with elementary, middle, and high school principals, the central office departments and executive leadership team has not effectively communicated the "common calendar" on the website to principals throughout the School System.

Principals are the chief operating officers of their respective schools and must meticulously plan their schedules to maximize the amount of time they spend in their schools attending to instructional, student discipline, human resources, parental involvement, and building operations and management issues. If principals are unaware of the existence of a common calendar on the School System's website they must continuously react at the last minute to unscheduled meetings. Effective communication from the central office on how to access and use the calendar on the School System's website will allow the principals to better plan their schedules, thereby reducing the continued absence from their schools which could very well have a negative impact on student achievement.

The Center for Educational Leadership in the College of Education at the University of Washington developed a *Principal Support Framework* from information gathered from a survey of school districts and charter management organizations, on-site visits, and phone interviews. This framework represents the best thinking of educators and other staff in participating school systems and charter management organizations about the support that is essential to principals if they are to serve as effective instructional leaders in their schools. To make it possible for principals to be effective instructional leaders, the *Principal Support Framework* suggests central office leaders limit requirements for principals to be away from their schools during the school day and during teacher professional development time, suggesting that central office leaders continuously work with principals to help them identify things they can "let go of."

#### **RECOMMENDATION 1-K.1**

**Communicate to principals how to access and use the common calendar on the School System's website that codifies all meetings and events scheduled by central office departments to facilitate advance planning and schedule management.**

The chief academic officer should work with the executive officer for elementary schools and the assistant to the director of schools for Communications to communicate to principals how to access and use the common calendar on the School System's website to help principals plan their schedules and effectively manage their time away from their schools. The Leadership and Learning Department in the central office should take ownership for effectively communicating to principals how to access and use the calendar and work with the assistant to the director of schools for Communications to coordinate meetings the disparate departments in the central office schedule each month and annually. It is important that this communication provide specific guidance on how to use the calendar to review all meetings scheduled in advance to reduce the instances of last minute meetings that disrupt principals' schedules.

Communicating how to access and use the common calendar on the School System's website will enable principals to more effectively manage their schedules to meet the standard included in the Principal

Support Framework, which recommends principals leave their schools no more than one day per month for School System activities that are not related to instructional improvement and student learning.

### **FISCAL IMPACT**

The School System can implement this recommendation with existing resources.

### **OBSERVATION 1-L**

**The School System does not have formal school-based advisory teams at all schools that allow school staff, parents, and community members to be involved in the system’s decision-making process.**

The director of schools has a Parent Advisory Council that is comprised of two representatives from 120 schools within the School System representing all 12 geographical clusters. Additionally, parent teacher associations and parent teacher organizations select one representative and one alternate to represent their respective school cluster at the Cluster Parent Group. The representatives communicate their schools’ concerns and ideas to their Cluster Parent Group and report information obtained at the Cluster Parent Group meeting back to their school.

According to the School System’s website, the Parent Advisory Council meets with the director of schools and other system administrators as “a collective body of 240 representatives” every other month to discuss systemwide concerns. In alternate months, Cluster Parent Groups attend individual cluster meetings to discuss cluster concerns and have training and development sessions. In reviewing the School System’s website and related supporting documentation, there appears to be no consistent opportunity to obtain school-level feedback from members of the business community other than through community partnerships.

According to the Family and Community Partnerships Departments, in addition to the Parental Advisory Council, high schools have advisory boards consisting of parents, teachers, administrators, and community members; and all Title I schools are required to have active and current School Improvement Planning teams that consist of teachers, parents, and partners. Although Title I schools have this requirement, non-Title I schools often have active Parent Teacher Organizations/Parent Teacher Association organizations that are very involved in decision-making processes at their respective schools. However, these organizations consist primarily of parents and teachers rather than business and community partners. Moreover, school-based leadership and staff have as one of their primary duties to identify and appoint parents to school-based decision teams.

With the School System’s long-term strategic plan’s emphasis on improving student achievement through quality teaching, equity and excellence, and transformational leadership, as well as the director of schools’ desire to provide principals more autonomy at the school level, decision-making must originate at the school level with diverse stakeholders other than just parents, teachers, and administrators. Without input from parents, community members, and business leaders at the school level, principals cannot structure programs and activities to effectively meet the needs of the individual communities they serve.

The state of Texas mandates a school-based decision-making structure that includes school-level decision-making committees. The school principal chairs these committees that include elected classroom teachers, other school-level professional staff, parents, community members, and business leaders representative of the school community's diversity. These committees serve in an advisory role to the principal in much the same way as the director of schools Parent Advisory Council. The school level committees are primarily responsible for assisting principals with developing, reviewing, and revising school improvement plans, including providing input on planning, budgeting, curriculum, school staffing patterns, staff development, and school organization.

#### **RECOMMENDATION 1-L.1**

**Establish mandatory school-level advisory committees at all schools to allow school staff, parents, and community members representative of the school community to be involved in the system's decision-making process.**

The director of schools should consider establishing mandatory school-level advisory committees at all schools as the School System transitions to providing autonomy for all principals by 2015–2016. These advisory committees would be chaired by the principals of the respective schools and include diverse membership from the community surrounding the schools. At a minimum, the committees should include one assistant principal, guidance counseling staff, custodial staff, one teacher elected from each grade level, one parent from each grade level, two members of the community at large, and two members of the business community.

The committee should serve in an advisory role to the principal; providing input and feedback in developing school improvement plans, curriculum concerns, school staffing, staff development, and school management.

#### **FISCAL IMPACT**

The School System can implement this recommendation with existing resources.

#### **OBSERVATION 1-M**

**The School System has not granted all principals complete authority to make all decisions at their respective schools as it transitions to school autonomy.**

The School System is in the initial stages of implementing full school autonomy for all schools throughout the School System, as the director of schools piloted 17 schools in 2013–2014 to begin phasing in school autonomy over three years. The initial pilot includes innovation schools and network lead schools; the system will add 55 middle and high schools in 2014–2015, with the remaining elementary and specialty schools receiving autonomy to make certain decisions by 2015–2016.

The initiative to transition to school autonomy is the result of the School System's collaboration with the Tribal Group through the Inspirational Schools Partnership. The Inspirational Schools Partnership cited the lack of principal autonomy as an impediment to student achievement. Accordingly, the director of schools decided to provide principals in the School System some level of autonomy during the phase-in period. The School System's central office will transform itself into a support services organization that exists to support the schools, and principals will have the following autonomy during the phase-in period:

- selecting and hiring assistant principals;
- selecting their own teachers up until June 16<sup>th</sup> of every year because of a contractual commitment to hire 75 teachers from Teach for America; and
- budgeting flexibility based on a weighted average student-funding model that will provide flexibility with administrative staffing.

The director of schools has yet to grant principals the autonomy to make decisions regarding specific instructional programs aligned with the system's long-term strategic plan or staff development.

#### **RECOMMENDATION 1-M.1**

**Expand the types of school-level decisions principals can make during the School System's three-year transition to school autonomy.**

During the three-year phase-in period to achieve full school autonomy, the director of schools should work with the executive leadership team to determine the specific types of additional authority to give principals for school-level decisions to assist them with managing their schools. At a minimum, the principals should have the authority to implement specific instructional programs at their schools as long as the programs are aligned with the School System's strategic plan. Further, the principals should also have the authority to provide staff development for their teachers and staff that may be unique to the instructional programs and operations of their respective schools.

#### **FISCAL IMPACT**

The School System can implement this recommendation with existing resources.

#### **OBSERVATION 1-N**

**The School System has not sufficiently trained school principals to assume the authority they need to manage their schools effectively while adhering to systemwide policies and procedures.**

As the School System transitions to school autonomy, principals will be required to make school-level decisions regarding budgeting, staffing, human resources management, instructional programming, and staff development. The central office made these types of decisions in the past, which limited the principals' flexibility to modify the decisions to address the unique characteristics and demographic profiles of their respective schools.

Principals who are untrained to administer functions previously managed from central office will have less time to focus on improving student achievement, as they will have steep learning curves related to non-instructional functions. The School System conducts a Principals' Leadership Institute twice each year—one in winter and another in summer—where this training could occur.

#### **RECOMMENDATION 1-N.1**

**Use the Principals Leadership Institute to train principals to manage their schools once they achieve autonomy from the central office.**

Leadership and Learning should work with Human Capital to design specific, targeted training for principals assuming more authority and responsibility in the School System's transition to school-level decision-making because of school autonomy. This training should, at a minimum, include the following areas:

- school funding formulas and budgeting;
- staffing allocations;
- due process, grievances, and evaluations;
- safety and crisis planning;
- school operations management; and
- time management and delegation.

### **FISCAL IMPACT**

The School System can implement this recommendation with existing resources.

### **OBSERVATION 1-O**

**The School System frequently does not allocate assistant principal positions according to its staffing formulas or recommended staffing standards for assistant principals included in *AdvancED Accreditation Standards for Quality Schools*, thereby resulting in a lost opportunity to periodically evaluate the need for assistant principal positions at specific schools throughout the system.**

The School System has detailed school staffing formulas for certificated and school support positions for 2013–2014. These formulas serve as an initial starting point to allocate full-time equivalent positions for certificated and school support administrative personnel based on enrollment in each elementary, middle, and high school. Members of the director of schools' executive leadership team acknowledge the School System intentionally does not always follow its documented staffing formulas because of its unique student demographics, which require the chief academic officer, chief human capital officer, and chief financial officer to take into consideration the individual needs of schools when allocating assistant principal positions. Accordingly, these three members of the executive leadership team collaboratively consider variables unique to each school, including, but not limited to:

- academic performance;
- number of special education students;
- number of students participating in the free and reduced-lunch program;
- location of the school; and
- at-risk student population.

The School System's process for making staffing decisions allows the chief academic officer, chief human capital officer, and chief financial officer to introduce an element of subjectivity to make exceptions to allocating assistant principals to individual schools in accordance with the 2013–2014 School Staffing Formulas.

AdvancED publishes an *Educational Practices Reference Guide*, copyrighted in 2013, which describes educational practices it has found, through its experience base, to assist in providing a quality learning environment. According to AdvancED, “the *Educational Practices Reference Guide* is designed to serve as a resource to school leaders seeking a reference point or example of practices that are aligned with the *AdvancED Accreditation Standards for Quality Schools*.” AdvancED cautions: “the reference guide should not be interpreted as requirements, nor should it limit thinking about common practice. The practices serve as reference points of what is generally accepted as good practice, and the practices provide schools with a starting point for comparison. They do not represent the end point, nor should they limit creative and innovative practices that best meet the needs of students.” Accordingly, the reference guide includes recommended staffing levels for certificated administrative personnel, including principals, assistant principals, counselors, and library media specialists.

**Exhibit 1-25** presents a comparison of the School System’s school staffing formulas for 2013–2014 for assistant principals to AdvancED’s recommended staffing levels for assistant principals, by type of school.

**Exhibit 1-25**  
**Comparison of Metropolitan Nashville Public Schools’ Staffing**  
**Formula for Assistant Principals in 2013–2014 to AdvancED, Standards for Assistant Principals**

Type of School	Metropolitan Nashville Public Schools Staffing Formula	Staffing Levels Recommended by AdvancED	Metropolitan Nashville Public Schools Formula vs. AdvancED Standards
<b>Elementary</b>	<ul style="list-style-type: none"> <li>1 – 499 Students – No Assistant Principal.</li> <li>Each Additional 500 Students – 1.0 Assistant Principal.</li> </ul>	<ul style="list-style-type: none"> <li>1 – 499 Students – No Assistant Principal.</li> <li>Every Additional 250 Students – 0.5 Assistant Principal.</li> </ul>	AdvancED standards allow an additional 0.5 assistant principal up to 250 students, but for each additional 500 students the standards are identical to Metropolitan Nashville Public Schools’ formula.
<b>Middle School</b>	<ul style="list-style-type: none"> <li>1 – 499 Students – No Assistant Principal.</li> <li>Each Additional 500 Students – 1.0 Assistant Principal.</li> </ul>	<ul style="list-style-type: none"> <li>1 – 249 Students – No Assistant Principal.</li> <li>Every Additional 250 Students – 0.5 Assistant Principal.</li> </ul>	AdvancED standards allow an additional 0.5 assistant principal <i>more</i> than Metropolitan Nashville Public Schools’ formula up to an additional 250 students, but for each additional 500 students the standards are identical.
<b>High School</b>	<ul style="list-style-type: none"> <li>1 – 499 Students – No Assistant Principal.</li> <li>Each Additional 500 Students – 1.0 Assistant Principal.</li> </ul>	<ul style="list-style-type: none"> <li>1 – 249 Students – No Assistant Principal.</li> <li>Every Additional 250 Students – 0.5 Assistant Principal.</li> </ul>	AdvancED standards allow an additional 0.5 assistant principal <i>more</i> than Metropolitan Nashville Public Schools’ formula up to an additional 250 students, but for each additional 500 students the standards are identical.

Source: *Metropolitan Nashville Public Schools Staffing Formulas for 2013–2014; AdvancED Educational Practices Reference Guide, Copyright 2013, Page 14.*

While the School System’s staffing formula and the AdvancED standards do not introduce subjective factors into developing recommended staffing levels for assistant principals, they can be used as a reference point to evaluate the reasonableness of final allocations of assistant principals to individual schools after applying needs-based, subjective criteria. For example, **Exhibit 1-25** shows that the school staffing formulas for assistant principals is less generous than the staffing levels for assistant principals in elementary, middle’ and high schools recommended by AdvancED, as AdvancED’s recommended staffing for assistant principals is 0.5 full-time equivalents higher at each level, before considering subjective, needs-based variables.

**Exhibit 1-26** compares the School System’s actual assistant principal staffing levels in elementary schools to AdvancED staffing standards and to the School System’s school staffing formula 2013–2014.

**Exhibit 1-26**  
**Comparison of Actual Assistant Principals Staffing Levels for Elementary Schools to Metropolitan Nashville Public Schools’ Staffing Formula for 2013–2014 to AdvancED Staffing Standards**

Elementary School	Enrollment	Actual Assistant Principals	AdvancED Standard	Difference Over (Under) AdvancED Standard	MNPS Staffing Formula for 2013 - 2014	Difference Over (Under) MNPS Staffing Formula
Am`qui	640	1.0	0.5	0.5	1.0	-
Binkley, Norman	468	1.0	-	1.0	-	1.0
Cane Ridge	908	2.0	1.0	1.0	1.0	1.0
Chadwell	340	1.0	-	1.0	-	1.0
Churchwell, Robt	539	3.0	0.5	2.5	1.0	2.0
Cole	815	1.0	1.0	-	1.0	-
Dodson	545	1.0	0.5	0.5	1.0	-
Eakin	575	1.0	0.5	0.5	1.0	-
Edison, Thos A	692	1.0	0.5	0.5	1.0	-
EO Buena Vista	355	1.0	-	1.0	-	1.0
EO Cockrill	500	1.0	0.5	0.5	1.0	-
EO Kirkpatrick	382	1.0	-	1.0	-	1.0
EO Napier	460	2.0	-	2.0	-	2.0
EO Park Ave	519	1.0	0.5	0.5	1.0	-
Glenclyff	528	1.0	0.5	0.5	1.0	-
Glennview	837	1.0	1.0	-	1.0	-
Gower	667	1.0	0.5	0.5	1.0	-
Granberry	726	1.0	0.5	0.5	1.0	-
Green, Julia	580	1.0	0.5	0.5	1.0	-
Harpeth Valley	774	2.0	1.0	1.0	1.0	1.0
Haywood	882	2.0	1.0	1.0	1.0	1.0
Hickman	553	1.0	0.5	0.5	1.0	-
Jackson, Andrew	536	1.0	0.5	0.5	1.0	-
Joy, Tom	552	1.0	0.5	0.5	1.0	-
Kelley, A Z	723	1.0	0.5	0.5	1.0	-
Lakeview	931	2.0	1.0	1.0	1.0	1.0
Major, Ruby	649	1.0	0.5	0.5	1.0	-
Maxwell	583	1.0	0.5	0.5	1.0	-

**Exhibit 1-26 (Cont'd)**  
**Comparison of Actual Assistant Principals Staffing Levels for Elementary Schools to Metropolitan Nashville Public Schools' Staffing Formula for 2013–2014 to AdvancED Staffing Standards**

Elementary School	Enrollment	Actual Assistant Principals	AdvancED Standard	Difference Over (Under) AdvancED Standard	MNPS Staffing Formula for 2013 - 2014	Difference Over (Under) MNPS Staffing Formula
Mills, Dan	559	1.0	0.5	0.5	1.0	-
Moss, JE	912	2.0	1.0	1.0	1.0	1.0
Mt View	673	1.0	0.5	0.5	1.0	-
Paideia - Jones	374	1.0	-	1.0	-	1.0
Paragon Mills	909	2.0	1.0	1.0	1.0	1.0
Percy Priest	556	1.0	0.5	0.5	1.0	-
Shayne, May Werthan	782	1.0	1.0	-	1.0	-
Stratton	669	1.0	0.5	0.5	1.0	-
Tulip Grove	556	1.0	0.5	0.5	1.0	-
Tusculum	642	1.0	0.5	0.5	1.0	-
Una	899	2.0	1.0	1.0	1.0	1.0
Whitsitt	546	1.0	0.5	0.5	1.0	-
Bellshire Design Center	528	-	0.5	(0.5)	1.0	(1.0)
Bordeaux EOS	372	-	-	-	-	-
Caldwell EOS	280	-	-	-	-	-
Carter-Lawrence Magnet	390	-	-	-	-	-
Charlotte Park	498	-	-	-	-	-
Hattie Cotton	450	-	-	-	-	-
Crieve Hall	403	-	-	-	-	-
Cumberland	405	-	-	-	-	-
DuPont Elementary	461	-	-	-	-	-
Fall-Hamilton EOS	316	-	-	-	-	-
Gateway	242	-	-	-	-	-
Glendale	423	-	-	-	-	-
Glengarry	474	-	-	-	-	-
Glenn EOS	179	-	-	-	-	-
Goodlettsville Elementary	441	-	-	-	-	-
Alex Green	377	-	-	-	-	-
Hermitage	298	-	-	-	-	-
Hull-Jackson Montessori	477	-	-	-	-	-
Inglewood	310	-	-	-	-	-
Joelton Elem.	306	-	-	-	-	-
Lillard Design Center	342	-	-	-	-	-
Lockeland Design Center	294	-	-	-	-	-
McGavock Elementary	313	-	-	-	-	-
Neely's Bend Elem	457	-	-	-	-	-
Old Center	367	-	-	-	-	-
Pennington	368	-	-	-	-	-
Rosebank	298	-	-	-	-	-
Ross	238	-	-	-	-	-
Shwab	372	-	-	-	-	-

**Exhibit 1-26 (Cont'd)**
**Comparison of Actual Assistant Principals Staffing Levels for Elementary Schools to Metropolitan Nashville Public Schools' Staffing Formula for 2013–2014 to AdvancED Staffing Standards**

Elementary School	Enrollment	Actual Assistant Principals	AdvancED Standard	Difference Over (Under) AdvancED Standard	MNPS Staffing Formula for 2013 - 2014	Difference Over (Under) MNPS Staffing Formula
Stanford Montessori	420	-	-	-	-	-
Sylvan Park Paideia	474	-	-	-	-	-
Warner EOS	343	-	-	-	-	-
Westmeade	504	-	0.5	(0.5)	1.0	(1.0)
<b>Total</b>	<b>37,756</b>	<b>50.0</b>	<b>23.0</b>	<b>27.0</b>	<b>36.0</b>	<b>14.0</b>

Source: Metropolitan Nashville Public Schools Data Upload for Current Staffing of Central Office – 2013-2014; Metropolitan Nashville Public Schools Data Upload for Charter School Detail Analysis provided to MGT of America with 2013-2014 Enrollment by School.

The detailed analysis in **Exhibit 1-26** shows that the School System has 27.0 more assistant principals than recommended by the AdvancED standards and 14.0 more assistant principals than recommended in its own School Staffing Formulas for 2013–2014. According to the School System's staffing formula for assistant principals in elementary schools, there should be a staff of 36.0 assistant principals in elementary schools based on the enrollment of each elementary school, as compared to a staff of 23.0 assistant principals recommended by AdvancED.

**Exhibit 1-27** compares the School System's actual assistant principal staffing levels in middle schools to AdvancED staffing standards and to the School System's school staffing formula for 2013–2014.

**Exhibit 1-27**
**Comparison of Actual Assistant Principals Staffing Levels for Middle Schools to Metropolitan Nashville Public Schools' Staffing Formula for 2013–2014 to AdvancED Staffing Standards**

Middle School	Enrollment	Actual Assistant Principals	AdvancED Standard	Difference Over (Under) AdvancED Standard	MNPS Staffing Formula for 2013 - 2014	Difference Over (Under) MNPS Staffing Formula
Allen, Margaret	475	2.0	0.5	1.5	0.0	2.0
Antioch	696	2.0	1.0	1.0	1.0	1.0
Apollo	813	2.0	1.5	0.5	1.0	1.0
Bailey	443	2.0	0.5	1.5	0.0	2.0
Bellevue	732	1.0	1.0	0.0	1.0	0.0
Cameron	571	1.0	1.0	0.0	1.0	0.0
Croft, Margaret Elise	739	1.0	1.0	0.0	1.0	0.0
Donelson	674	1.0	1.0	0.0	1.0	0.0

**Exhibit 1-27  
Comparison of Actual Assistant Principals Staffing Levels for Middle Schools to  
Metropolitan Nashville Public Schools' Staffing Formula for 2013–2014  
to AdvancED Staffing Standards (Cont'd)**

Middle School	Enrollment	Actual Assistant Principals	AdvancED Standard	Difference Over (Under) AdvancED Standard	MNPS Staffing Formula for 2013 - 2014	Difference Over (Under) MNPS Staffing Formula
DuPont Hadley	637	1.0	1.0	0.0	1.0	0.0
DuPont Tyler	660	1.0	1.0	0.0	1.0	0.0
Goodlettsville	538	2.0	1.0	1.0	1.0	1.0
Gra Mar	435	1.0	0.5	0.5	0.0	1.0
Haynes	210	1.0	0.0	1.0	0.0	1.0
Hill, HG	625	1.0	1.0	0.0	1.0	0.0
Joelton	277	1.0	0.5	0.5	0.0	1.0
Kennedy, JF	842	2.0	1.5	0.5	1.0	1.0
Litton, Isaac	339	1.0	0.5	0.5	0.0	1.0
Madison	752	2.0	1.5	0.5	1.0	1.0
Magnet - Crestwell Arts	459	1.0	0.5	0.5	0.0	1.0
Magnet - Head Middle	598	1.0	1.0	0.0	1.0	0.0
Magnet - Meigs	693	1.0	1.0	0.0	1.0	0.0
Marshall, Thurgood	812	2.0	1.5	0.5	1.0	1.0
McKissack	381	1.0	0.5	0.5	0.0	1.0
McMurray	732	2.0	1.0	1.0	1.0	1.0
Moore, JT	646	1.0	1.0	0.0	1.0	0.0
Museum - Early, John	518	2.0	1.0	1.0	1.0	1.0
Neely's Bend	547	1.0	1.0	0.0	1.0	0.0
Oliver, Wm Henry	790	2.0	1.5	0.5	1.0	1.0
Rose Park	407	1.0	0.5	0.5	0.0	1.0
Two Rivers	596	1.0	1.0	0.0	1.0	0.0
West End	472	1.0	0.5	0.5	0.0	1.0
Wright	857	2.0	1.5	0.5	1.0	1.0
Jere Baxter	438	0.0	0.5	-0.5	0.0	0.0
Brick Church	349	0.0	0.5	-0.5	0.0	0.0
East Nashville	486	0.0	0.5	-0.5	0.0	0.0
MLK	340	0.0	0.5	-0.5	0.0	0.0
<b>Total</b>	<b>20,579</b>	<b>44.0</b>	<b>31.5</b>	<b>12.5</b>	<b>22.0</b>	<b>22.0</b>

Source: Metropolitan Nashville Public Schools Data Upload for Current Staffing of Central Office – 2013-2014; Metropolitan Nashville Public Schools Data Upload for Charter School Detail Analysis provided to MGT of America with 2013-2014 Enrollment by School.

The detailed analysis in **Exhibit 1-27** shows that the School System has 12.5 more assistant principals than recommended by the AdvancED standards, and 22.0 more assistant principals than recommended by its own School Staffing Formulas for 2013–2014. According to the School System’s staffing formula for assistant principals in middle schools, there should be a staff of 22.0 assistant principals in middle schools based on the enrollment of each middle school. The analysis confirms that the School System’s staffing formula for assistant principal positions in its middle schools, before applying subjective, needs-based variables, yields lower staffing levels for assistant principals in middle schools than those recommended by AdvancED standards, which totals 31.5 positions.

**Exhibit 1-28** compares the School System’s actual assistant principal staffing levels in high schools to AdvancED staffing standards and to the School System’s School staffing formula for 2013–2014.

**Exhibit 1-28**  
**Comparison of Actual Assistant Principals Staffing Levels for High Schools to**  
**Metropolitan Nashville Public Schools’ Staffing Formula for 2013–2014**  
**to AdvancED Staffing Standards**

High School	Enrollment	Actual Assistant Principals	AdvancED Standard	Difference Over (Under) AdvancED Standard	MNPS Staffing Formula for 2013 - 2014	Difference Over (Under) MNPS Staffing Formula
Academy Old Cockrill	94	1.0	0.0	1.0	0.0	1.0
Antioch	1,977	6.0	3.5	2.5	3.0	3.0
Big Picture	171	1.0	0.0	1.0	0.0	1.0
Cane Ridge	1,668	5.0	3.0	2.0	3.0	2.0
Glenciff	1,418	5.0	2.5	2.5	2.0	3.0
Hillsboro	1,210	4.0	2.0	2.0	2.0	2.0
Hillwood	1,210	4.0	2.0	2.0	2.0	2.0
Hunters Lane	1,616	5.0	3.0	2.0	3.0	2.0
Magnet - East Nashville	1,196	3.0	2.0	1.0	2.0	1.0
Magnet - Hume Fogg	924	2.0	1.5	0.5	1.0	1.0
Magnet - King, ML	1,195	2.0	2.0	0.0	2.0	0.0
Magnet Nashville School of Arts	641	1.0	1.0	0.0	1.0	0.0
Maplewood	973	3.0	1.5	1.5	1.0	2.0
McGavock	2,300	6.0	4.5	1.5	4.0	2.0
Overton	1,798	4.0	3.5	0.5	3.0	1.0
Pearl Cohn	861	3.0	1.5	1.5	1.0	2.0
Stratford	725	3.0	1.0	2.0	1.0	2.0
Whites Creek	831	3.0	1.5	1.5	1.0	2.0
<b>Total</b>	<b>20,808</b>	<b>61.0</b>	<b>36.0</b>	<b>25.0</b>	<b>32.0</b>	<b>29.0</b>

Source: Metropolitan Nashville Public Schools Data Upload for Current Staffing of Central Office – 2013-2014; Metropolitan Nashville Public Schools Data Upload for Charter School Detail Analysis provided to MGT of America with 2013-2014 Enrollment by School.

The detailed analysis in **Exhibit 1-28** shows that the School System has 25.0 more assistant principals than recommended by the AdvancED standards, and 29.0 more assistant principals than recommended its own School Staffing Formulas for 2013–2014. According to the School System’s staffing formula for assistant principals in high schools, there should be a staff of 32.0 assistant principals in high schools based on the enrollment of each high school. Again, the analysis confirms that the School System’s staffing formula for assistant principal positions in its high schools, before applying subjective, needs-based variables, yields lower staffing levels for assistant principals in high schools than those recommended by AdvancED standards, which totals 36.0 positions.

While the School System is attempting to address the unique needs of its student population as it continues its reform initiatives, it is equally important to note that it is prudent to use its own staffing formula and AdvancED standards to periodically evaluate existing staffing allocations for assistant principals. A periodic evaluation of the practical application of staffing formulas for assistant principals will allow the School System to look for opportunities to reduce administrative costs as public school budgets tighten.

### **RECOMMENDATION 1-O.1**

**Evaluate the School System’s assistant principal staffing formula for inclusion of other relevant factors that may influence the assignment of assistant principals along with consideration of AdvancED recommended standards. Then, review assistant principal positions for optimal staffing levels.**

Despite current school administrative staffing levels often determined using subjective needs-based criteria to support school reform initiatives and instructional programs linked to goals and objectives included in Education 2018, the School System has an opportunity to review and evaluate the number of assistant principal positions based on its existing allocation model. Conducted annually or bi-annually, this review and evaluation could enable the executive leadership team to potentially reduce the number of assistant principal positions to more appropriately reflect its own staffing formula and AdvancED standards. While the School System has a number of programs geared toward the individual needs of its unique student population, the executive leadership team should strive to strike a balance between using subjective, needs-based criteria; following its own staffing formula; or following staffing levels recommended by AdvancED based on AdvancED’s broad experience with K–12 public schools and private schools.

Although AdvancED’s recommended staffing levels for assistant principals are by no means prescriptive; they clearly serve as a benchmark for comparison to determine minimum administrative staffing levels sufficient to meet the needs of students and ensure effective school operations. More importantly, the School System’s school staffing formulas for 2013–2014 provide guidelines for allocating assistant principals to schools, which are equally useful in establishing a benchmark for comparison as members of the executive leadership team periodically review and evaluate the number of assistant principal positions necessary to meet the needs of its students. Thus, the School System should take the opportunity to review and evaluate its allocation model and potentially eliminate assistant principal positions in elementary, middle, and high schools to strike a balance between its staffing formula and AdvancED’s recommended staffing levels.

**Exhibit 1-29** presents the fiscal impact of eliminating assistant principal positions.

**Exhibit 1-29**  
**Fiscal Impact of Eliminating Assistant Principal Positions**

<b>AdvancED Recommended Staffing Standards for Assistant Principals</b>			
<b>Type of School</b>	<b>Number of Assistant Principal Positions to Further Evaluate</b>	<b>Assistant Principal Salary from Administrative Salary Schedule [Masters, Step 4]</b>	<b>Total Estimated Annual Savings</b>
Elementary Schools	27	\$70,534	\$1,904,418
Middle Schools	12.5	\$71,828	\$897,850
High Schools	25	\$74,416	\$1,860,400
<b>Total</b>			<b>\$4,662,668</b>
<b>Metropolitan Nashville Public Schools Staffing Formula for Assistant Principals</b>			
Elementary Schools	14	\$70,534	\$987,476
Middle Schools	22	\$71,828	\$1,580,216
High Schools	29	\$74,416	\$2,158,064
<b>Total</b>			<b>\$4,725,756</b>

*Source: Human Capital Division, Assistant Principal Salaries from Metropolitan Nashville Public Schools Administrative Salary Schedule, 2013-2014 School Year.*

Evaluating the School System’s staffing formula could possibly result in a range of potential annual savings from eliminating assistant principals’ positions based on AdvancED standards or the School System’s Staffing Formulas for 2013–2014. The evaluation could possibly conclude that no adjustments to the School System’s staffing formula are necessary, which results in “zero” savings; or annual savings from the evaluation could be as much as \$4,725,756, based on the analysis included in the recommendation above. Accordingly, potential annual savings realized from evaluating the School System’s staffing formula ranges from a low of \$0 to a high of \$4,725,756.

**OBSERVATION 1-P**

**The School System follows its school staffing guidelines for librarians and library clerks; does not follow the guidelines for guidance counselors, guidance clerks, or guidance technicians; and does not have staffing guidelines for psychologists and therapists.**

Guidelines for staffing instructional-related support positions differ. They range from a simple enumeration by state departments or boards of education of the positions that school systems have the responsibility for establishing guidelines to more specific staff-to-student ratios offered by many professional associations and accrediting agencies. For example, Tennessee’s Rules of State Board of Education [Chapter 0520-1-03-.07 (2)(a) and (b), and 0520-01-03-.08 (1)] provide staffing levels for a limited number of positions including library information specialists but state that local boards “shall develop standards and policies for attendance services, guidance services, school psychological services, school social work services, and school health services.”

Virginia’s Education Code [Code of Virginia, Title 22.1-253, Education, Chapter 13.2, Standard 2] stipulates specific staff-to-student ratios for librarians, guidance counselors, technology support and resource personnel, and school-based clerical personnel. For other positions, including social workers, school nurses, and school psychologists, it simply requires local boards to “provide those support services that are necessary for the efficient and cost-effective operation and maintenance of its public schools.” The

Standards for School Libraries recommends staffing based on five categories of student enrollment each of which includes three levels of staffing—minimum, average, and exemplary.

The Pennsylvania Department of Education’s guidelines contain three enrollment categories each with a minimum and exemplary staffing level. Maryland’s recommended staff assignments are based on four enrollments levels for elementary libraries and six for secondary libraries.

Added guidance related to staffing is provided by some state boards of education. In Tennessee, for example, the state board provides a listing of Basic Education Program components that serve as the basis for calculating the level of funding for each school system in Tennessee [BEP Blue Book at [www.tn.gov/.../BEP\\_Blue\\_Book\\_FY13-14](http://www.tn.gov/.../BEP_Blue_Book_FY13-14)].

The guidelines of school systems are generally more specific in terms of how and at what level schools qualify for staff. The Miami-Dade and Polk County School Districts in Florida have lengthy regulations outlining how staffing allocations are determined by level, program, and fund, and, as do the Austin and Fort Worth Independent School Districts in Texas, use staff-to-student ratios to allocate assistant principals, media specialists, counselors, and clerical staff.

Generally, any differences among districts (regardless of size) in how staff allocations are determined are related to enrollment or some other student measure such as average daily membership. For example, while all four districts above allocate a principal position regardless of a school’s enrollment, the manner in which they allocate counselors differs. In Miami-Dade, an elementary school does not receive a second counselor until enrollment exceeds 900 students. In Polk County, there is no increase to the allocation of one counselor per elementary school regardless of enrollment. The maximum full-time equivalent allocation for counselors in the Austin Independent School District is 1.5, which does not occur until a school’s enrollment reaches 1,000 students. Fort Worth Independent School District, on the other hand, allocates a second counselor when enrollment reaches 801. The same kind of differences exists for all instructional support positions.

Professional organizations as well as organizations that provide management and staffing studies or that serve as accrediting agencies also offer guidelines for allocating staff. AdvancED suggests student-to-staff ratios for a school’s administrative head, assistant administrator, counselor, and library media specialist. The Council on Accreditation and School Improvement recommends standards for a school’s administrative head; administrative or supervisory assistants; guidance professionals; library or media specialists; and support staff for administration, library media, or technology [Accreditation Standards 2005, Southern Association of Colleges and Schools/ Council on Accreditation and School Improvement, page 7].

The National Association of School Psychologists suggests that student-to-staff ratios for psychological services generally should not exceed 1,000 students per school psychologist. If the psychologists are providing more comprehensive services such as evaluations, consultation, individual/group counseling, crisis response, behavioral intervention – the ratio should not exceed 500 to 700 students for each psychologist [Model for Comprehensive and Integrated School Psychological Services, National Association of School Psychologists, 2010, Page 10].

Determining appropriate staffing levels for other positions is more difficult. As an example, many districts do not have specific guidelines for therapists, and those that do vary widely. In November 2010, the District Management Council conducted a study for the Lexington (Massachusetts) Public Schools entitled *Student Services & Financial Assessment*. Data on special education services gathered in the study from nearly 900 schools across 45 states found that it was not uncommon to see a 200 percent variation in speech and

language staffing and a 1,000 percent variation in occupational therapy staffing. It also found that caseloads for related services staff often vary by 30-40 percent, both within a district and between like districts. In the same study, responses to a survey of more than 200 therapists nationwide indicated that caseloads vary by 30 percent within a given district, contact hours with children vary by 50 percent from therapist to therapist, and average group sizes vary by 250 percent even when serving similar students.

The School System classifies staff positions as either school-attributed or non-school attributed. Although either can be funded through the general operating budget or one of the various grants administered by the System, this analysis considered only positions funded through the general operating budget. School-attributed positions are those serving one or more schools to which any full-time equivalent values are assigned for accounting purposes.

Included among the school-attributed positions are librarians, counselors, psychologists, therapists, instructional coaches, educational assistants/paraprofessionals, and secretaries/clerks. The positions assigned to each school are determined by staffing guidelines for librarians, guidance counselors, library clerks, and office support staff at all levels; guidance techs at the middle school level only; guidance clerks at the middle and high school levels; and guidance registrars at the high school level only.

The system does not include psychologists, therapists, instructional coaches, or educational assistants and paraprofessionals in its staffing guidelines. Instructional coaches were not included in this analysis as most of those positions are grant-funded. Educational assistants/paraprofessionals and office support staff were not included because of the difficulty in gathering comparable data for comparison.

**Exhibit 1-30** shows the School System’s staffing formulas allocate one librarian per elementary, middle, and high school with up to 1,499 students and two librarians in schools with 1,500 or more students. Based on 2013–2014 enrollments, the number of formula-provided school-based librarians is 130.0. The actual number assigned to schools was 129.0.

**Exhibit 1-30**  
**Metropolitan Nashville Public Schools Staffing Formula for Librarians**

School Size	MNPS Staffing Formula	Number of Librarians	Number of Librarians Per Formula	Actual Number of Librarians
<b>Elementary</b>				
1 to 1,499 Students	1	73	73	73
1,500 or More Students	2	0	-	-
Elementary Total		73	73	73
<b>1. Middle School</b>				
1 to 1,499 Students	1	36	36	36
1,500 or More Students	2	0	-	-
Middle School Total		36	36	36
<b>2. High School</b>				
1 to 1,499 Students	1	12	13	12
1,500 or More Students	2	4	8	8
High School Total		16	21	20
Grand Total		125	130	129

*Source: Metropolitan Nashville Public Schools, Learning Technology and Library Services, February 2014. School Staffing Formulas for 2013-2014.*

**Exhibit 1-31** shows the funding for librarian positions provided through the Basic Education Program components generates 128.5 elementary and secondary librarian positions, 103.5 for schools with any combination of grades K-8, and 25.0 positions for schools with grades 9-12.

**Exhibit 1-31  
Basic Education Program Funding Components for Librarians  
Tennessee State Board of Education**

School Size	BEP Funding Level Formula	Number of Campuses	Number of Library Information Specialists Per Formula	Actual Number of Library Information Specialists
<b>Any Combination of Grades K-8</b>				
1 to 264 Students	0.5	11	5.5	11.0
265 to 439 Students	1.0	36	36.0	36.0
440 to 659 Students	1.0	38	38.0	38.0
660 or More Students	1.0	24	24.0	24.0
K-8 Total		109	103.5	109.0
<b>3. High School</b>				
1 to 299 Students	0.5	0	0	0
300 to 999 Students	1.0	7	7	7.0
1,000 to 1,499 Students	2.0	5	10	6.0
1,500 to 2,249	2.0	4	8	8.0
2,250 Students or More	3.0	0	0	0
High School Total		16	25	21.0
Grand Total		125	128.5	130.0

Source: 2013-2014 BEP Blue Book, Tennessee basic Education Program BEP 2.0, State Board of Education.

**Exhibit 1-32** shows the allocated library clerks according to the System's staffing guidelines results in 84.5 positions. The actual number of clerks allocated is 81.0, 34.0 at the elementary level, 29.5 at the middle school level, and 17.5 at the high school level. There is no provision in the Basic Education Program components for library clerks.

**Exhibit 1-32  
Metropolitan Nashville Public Schools Staffing Formula for Library Clerks**

School Size	MNPS Staffing Formula	Number of Campuses	Number of Library Clerks Per Formula	Actual Number of Library Clerks
<b>Elementary</b>				
1 to 449 Students	0.0	22	0.0	5.5
450 to 599 Students	0.5	35	17.5	13.0
600 or More Students	1.0	16	16.0	15.5
Elementary Total		73	33.5	34.0
<b>4. Middle School</b>				
1 to 399 Students	0.5	8	4.0	3.0
400 to 999 Students	1.0	28	28.0	26.5
1,000 or More Students	1.5	0	-	-
Middle School Total		36	32.0	29.5

**Exhibit 1-32**  
**Metropolitan Nashville Public Schools Staffing Formula for Library Clerks (Cont'd)**

School Size	MNPS Staffing Formula	Number of Campuses	Number of Library Clerks Per Formula	Actual Number of Library Clerks
<b>High School</b>				
1 to 1,499 Students	1.0	12	12.0	10.5
1,500 to 1,999 Students	2.0	3	6.0	5.0
2,000 or More Students	1.0	1	1.0	2.0
High School Total	-	16	19.0	17.5
Grand Total	-	125	84.5	81.0

*Source: Metropolitan Nashville Public Schools, Learning Technology and Library Services, February 2014. School Staffing Formulas for 2013-2014.*

The School System employs 44.0 full-time equivalent social workers but has no staffing guidelines for this position. Lee County, a similar-size district in Florida with an average daily membership of 83,486, employs 32.0 equivalent social workers, or a 1:2,609 social worker to students ratio. This compares with the ratio of social workers to students in the School System of 1:1,770 (44 social workers to 77,870 students in average daily membership). The State of Tennessee Basic Education Program funding level components for social workers is 1 per 2,000 students in total average daily membership, or 39.0 full-time equivalent social workers.

**Exhibit 1-33** shows the System's staffing guidelines for guidance counselors provide for 211.5 positions, 79.5 at the elementary level, 64.0 at the middle school level, and 68.0 at the high school level. The actual number of guidance counselors is 212.0; 83.5, 57.0, and 71.5 at the elementary, middle, and high school levels respectively, which indicates that while the total number of positions closely approximates that provided by the staffing guidelines, the System is not following its guidelines with respect to the staffing of counselors at the elementary, middle school, or high school levels.

**Exhibit 1-33**
**Metropolitan Nashville Public Schools Staffing Formula for Guidance Counselors**

School Size	MNPS Staffing Formula	Number of Campuses	Number of Guidance Counselors Per Formula	Actual Number of Guidance Counselors
<b>Elementary</b>				
1 to 299 Students	0.5	7	3.5	-
300 to 699 Students	1.0	54	54.0	-
700 to 799 Students	1.5	4	6.0	-
800+ Students	2.0	8	16.0	--
Total Elementary	-	73	79.5	83.5
<b>5. Middle School</b>				
1 to 500 Students	1	14	14.0	--
501 to 750 Students	2	16	32.0	-
751 to 1,250 Students	3	6	18.0	-
Total Middle	-	36	64.0	57.0
<b>6. High School</b>				
1 to 699 Students	2	1	2.0	-
700 to 1,399 Students	3	9	27.0	-
1,400 to 1,799 Students	4	4	16.0	-
1,800 to 1,999 Students	5	1	5.0	-
2,000 to 2,999 Students	6	1	6.0	-
2,400+ Students	7	0	-	-
Grade 9 at Zoned Highs	1	12	12.0	-
Total High	-	28	68.0	71.5
Grand Total	-	-	211.5	212.0

Source: Metropolitan Nashville Public Schools, Director's Annual Membership/Attendance Report, 2012-2013, School Staffing Formulas for 2013-2014, April 2014.

The Basic Education Program components for guidance counselors is 1.0 per 500 students in average daily membership in grades K-6, and 1.0 per 350 students in average daily membership in grades 7-12. According to the Director's Annual Membership/Attendance Report for 2011-2012, dated January 29, 2014 ("Director's Annual Membership/Attendance Report"), based on an average daily membership of 46,037 in grades K-6 and 31,833 in grades 7-12, those guidelines generate 183.0 positions: 92.0 at grades K-6 and 91.0 at grades 7-12.

**Exhibit 1-34** shows the System's staffing formulas for guidance clerks and technicians generate a total of 26.0 guidance clerks and 3.0 guidance technicians at the middle school level, and 21.0 guidance clerks at the high school level. The formulas make no allowance for guidance clerks or technicians at the elementary level. Information provided by the School System indicates that 69.5 guidance clerks/support positions were eliminated after the beginning of the 2013-2014 school year, resulting in fewer guidance clerk and technician positions than provided by the staffing formulas.

**Exhibit 1-34**
**Metropolitan Nashville Public Schools Staffing Formula for Guidance Clerks and Technicians**

School Size	MNPS Staffing Formula	Number of Schools	Number of Guidance Clerks Per Formula	Number of Guidance Technicians Per Formula
<b>Guidance Clerks</b>				
<b>Middle Schools</b>				
1 to 599 Students	0.5	20	10.0	0
600 or More Students	1.0	16	16.0	0
Total	-	36	26.0	0
<b>High Schools</b>				
1 to 1,599 Students	1.0	11	11.0	0
1,600 or More Students	2.0	5	10.0	0
Total	-	16	21.0	0
<b>Guidance Technicians</b>				
<b>Middle School</b>				
1 to 749 Students	0.0	33	-	0.0
750 or More Students	1.0	3	3.0	3.0
Total	-	36	3.0	3.0

Source: School Staffing Formulas for 2013-2014.

\*No staffing formula for guidance clerks or technicians for elementary schools.

The System currently employs 51.0 psychologists but has no staffing guidelines for the position. Using a student-to-staff ratio of 1,000 to 1 as suggested by the National Association of School Psychologists, the School System would have 82.6 psychologists. The Basic Education Program funding level components for psychologists is 1 per 2,500 of total average daily membership. Based on the System's average daily membership of 77,870, the BEP allows for 31.0 positions.

The System does not have staffing guidelines for therapists, nor does Tennessee include that position in its Basic Education Program components. The wide range of therapy services available in school districts makes comparisons difficult. Baltimore County Public Schools, for example, lists seven available related services described as "therapy" or staffed by a "therapist"—assistive technology, audiology, occupational, physical, speech-language, music, and art.

The Maryland State Department of Education issues an annual statistical handbook that provides the number of full-time equivalent personnel in several different groupings, one of which combines therapists with teachers. Two districts, Anne Arundel Public Schools and Baltimore City Public Schools, are similar in size to the School System. The student-to-teacher/therapist ratio in Anne Arundel is 14.4 to 1 (i.e., Anne Arundel enrolls 76,303 students and employs 5,314 teachers/therapists) and is 14.9 to 1 in Baltimore City (Baltimore City enrolls 84,212 students and employs 5,659 teachers/therapists), both smaller than the 16.3 to 1 in the School System. Using the average student to teacher/therapist ratio for Anne Arundel and Baltimore of 14.63 and assuming that the number of teachers and therapists would both be affected by lowering the ratio, the System's allocation of therapists would be 31.0, an increase over the current allocation of 25.5.

The School System's staffing guidelines do not accurately reflect how and on what basis positions are allocated. System staff has indicated that multiple factors influence not only the number of requested positions but to which locations they are assigned.

**RECOMMENDATION 1-P.1**

**Develop a comprehensive set of staffing guidelines for all support staff positions assigned to campuses that more accurately reflect not only student enrollments, but also other relevant factors that influence the assignment of support staff.**

The School System should develop and document comprehensive staffing guidelines for all support staff positions, including psychologists and therapists that reflect needs-based criteria in addition to student enrollment. For example, these needs-based criteria should include such relevant factors as students with disabilities, students of color, and students from low income families, who are at a greater risk for mental health challenges, but are less likely to receive the appropriate services [Vera, Buhin & Shin, 2006].

Comprehensive, well-documented staffing guidelines for all support staff positions will enable the School System to consistently apply its staff allocation methodology based on student enrollment and needs-based variables.

**FISCAL IMPACT**

The School System can implement this recommendation with existing resources.

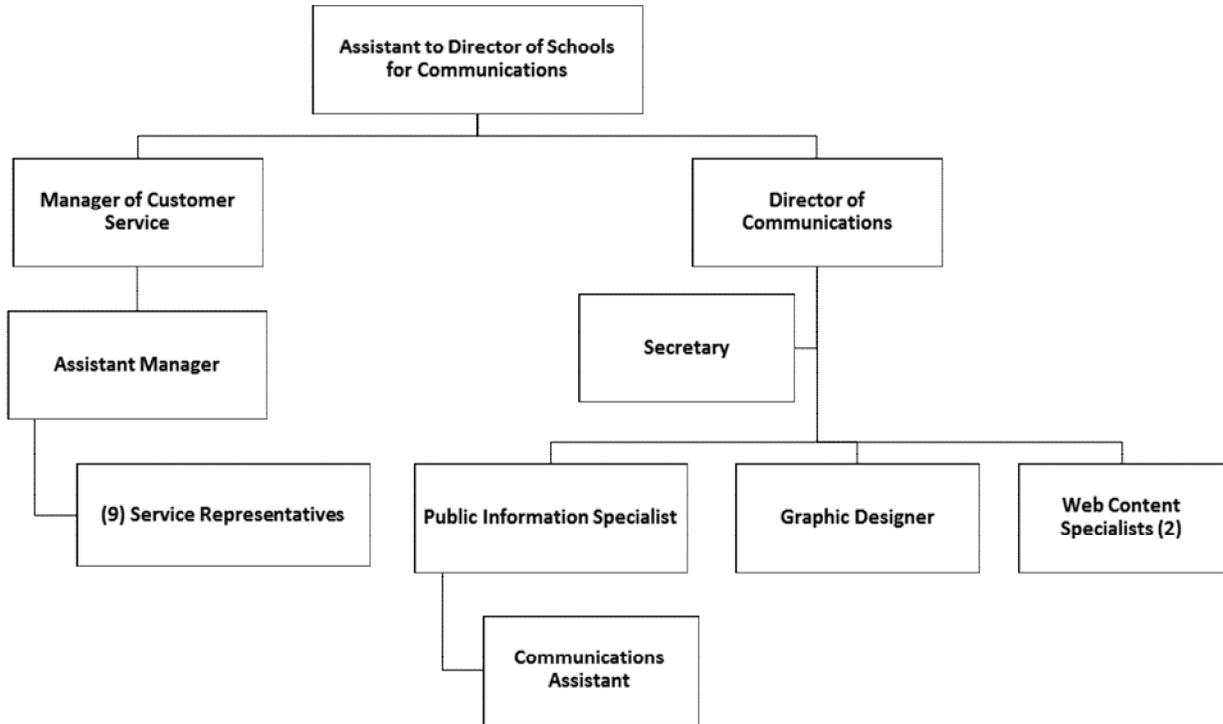
**COMMUNICATIONS**

The School System's Communications Department is responsible for providing a clear and concise framework for communicating with internal and external stakeholders (parents and community members, taxpayers, business, civic, and political leaders). It is important that the School System engage in effective "two-way" communication, which means providing transparent information that results in a better understanding of objectives, accomplishments, and the needs of the organization. Equally as important, the School System's Communications Department is responsible for listening to the needs of stakeholders and ensuring that an effective feedback process is in place so that information needs are met.

The School System is diverse, serving students from more than 80 countries speaking more than 70 different languages. African American students comprise 45 percent of the system's population, with Caucasians and Hispanics making up the next largest groups with 32 percent and 19 percent, respectively. Nearly 73 percent of the School System's children are economically disadvantaged.

Led by the assistant to the director of schools for Communications, the department is staffed with 19 professionals (including the assistant to the director of schools). **Exhibit 1-36** presents the School System's Communications Department organizational structure.

**Exhibit 1-36**  
**Communications Department Organizational Chart**



Source: Metropolitan Nashville Public Schools, January 2014.

**Exhibit 1-37** presents a summary overview of the organizational units and associated responsibilities for the School System’s Communication’s Department.

**Exhibit 1-37**

**Organizational Units Responsible for Performing Communications Department Functions**

Organizational Unit	Major Functions
<i>Assistant to the Director of Schools for Communications</i>	<ul style="list-style-type: none"> <li>• Provides systemwide strategic direction and high quality service for communication initiatives.</li> <li>• Advances the School System’s priorities to improve student performance, support effective human capital practices.</li> <li>• Ensures communications are clear and timely.</li> </ul>
<i>Director of Communications</i>	<ul style="list-style-type: none"> <li>• Serves as School System spokesperson to local and national media.</li> <li>• Assists schools and departments with communication questions and needs.</li> <li>• Prepares content for publications and website.</li> <li>• Point of content for open records requests.</li> </ul>
<i>Senior Secretary for Communications</i>	<ul style="list-style-type: none"> <li>• Prepares correspondence, updates school directory/school list each for print, and distributes publications to schools and the community.</li> <li>• Prepares certificates for school board recognitions, teacher of the year and retirees. Prepares folder for Proposal Review Committee reviews and responds by letter or email with decision.</li> </ul>
<i>Communications Specialist</i>	<ul style="list-style-type: none"> <li>• Issues press releases and media advisories.</li> <li>• Spokesperson and handles local and national media inquiries.</li> <li>• Provides content for School System publications, including Children First!, Report Home, the Annual Report, and various other publications.</li> <li>• Manages Facebook/Twitter and runs live-blog events on Children's First!</li> </ul>
<i>Communications Assistant</i>	<ul style="list-style-type: none"> <li>• Writes and distributes employee communication pieces.</li> <li>• Attends events and meetings and takes photographs as requested.</li> <li>• Distributes press releases and media advisories.</li> <li>• Serves as back up payroll assistant.</li> <li>• Assists with media inquiries and special events.</li> <li>• Assists with ParentLink phone system account management.</li> </ul>
<i>Web Content Manager (2)</i>	<ul style="list-style-type: none"> <li>• Maintains content and create new content on School System website and the employee website.</li> <li>• Designs and develops websites/webpages within the School System site and employee portal.</li> <li>• Trains School System employees to use the Content Management System.</li> <li>• Devises content standards and navigation guidelines for school websites.</li> <li>• Implements content plan for school websites, including hands-on reorganization and site building.</li> <li>• Evaluates and grades school website and website team performance.</li> <li>• Manages Facebook/Twitter.</li> </ul>
<i>Multi-Media Design Specialist</i>	<ul style="list-style-type: none"> <li>• Designs printed materials for public distribution, such as logos, posters, flyers, brochures and booklets.</li> <li>• Assists in designing graphics for web production and visual presentations.</li> <li>• Coordinates design and print production of various central office projects by communicating with department managers and vendors.</li> </ul>

**Exhibit 1-37**

**Organizational Units Responsible for Performing Communications Department Functions (Cont'd)**

Organizational Unit	Major Functions
<i>Special Projects Manager</i>	<ul style="list-style-type: none"> <li>• Assists with planning/management of special events, including the First Choice Festival.</li> <li>• Develops content for special projects.</li> <li>• Provides Customer Care training to School System staff.</li> </ul>
<i>Customer Service Manager</i>	<ul style="list-style-type: none"> <li>• Leads the School System Customer Service Center.</li> <li>• Serves as Crisis Response Team Leader.</li> <li>• Troubleshoots and manages call center technologies.</li> <li>• Assists customers with concerns and addresses them in a timely fashion.</li> <li>• Collects and reports Customer Service Center statistics.</li> </ul>
<i>Customer Service Center Representatives</i>	<ul style="list-style-type: none"> <li>• Answers public inquiries about the School System and individual schools.</li> <li>• Works with central office visitors to answer questions/logs calls/inquiries.</li> </ul>

Source: Metropolitan Nashville Public Schools, Communications Department.

**OBSERVATION 1-Q**

The School System lacks a comprehensive communications plan; therefore, key strategic initiatives such as the Education 2018 are not effectively communicated to internal and external stakeholders.

Exhibit 1-38 summarizes the content of the School System’s Strategic Communications Plan for 2010-2013.

**Exhibit 1-38**  
**Communications Department**  
**Communications Plan Summary**

  
**STRATEGIC COMMUNICATIONS PLAN 2010-2013**

**SITUATION**

Metropolitan Nashville Public Schools provide pre-K-12 education to 79,000+ students in a diverse, urban community with a staff of 10,000. At present, the schools offer outstanding educational opportunities, but they are not uniformly available. The district's goal is to provide all students with an outstanding education. Taxpayer appetite for increasing resources to the school system is low, so current resources must be allocated to maximize their yield. The community recognizes the importance and value of making the public schools excellent; the Mayor and school board are supportive. MNPS's goal is to become the first choice for families.

MNPS is addressing its priorities with teams of administrators, teachers, community members and parents providing guidance and leadership. The priorities for these teams, called Transformation Leadership Groups or TLG's, are:

**Performance Drivers:**

- Improving the performance of students with special needs;
- Improving the performance of economically disadvantaged students;
- Improving the performance of EL/LEP students;
- Reforming middle schools; and
- Reforming high schools.

**Process Drivers:**

- Developing human capital;
- Improving communications;
- Leveraging informational technology/data management; and
- Transforming the district's central office.

**Key Messages:**

*Our vision, ingredients for success and beliefs continue to apply.*

- We will provide every student with the foundation of knowledge, skills and character necessary to excel in higher education, work and life. Metro Nashville Public Schools will be the first choice for families.
- We are working to accelerate student achievement and know our success is rooted in having great teachers and school administrators.
- Every person in Metro Schools is responsible for contributing to student achievement.
- District leaders and administrators are servants who support teachers and principals in our schools.

**Action Items:**

1. Develop weekly key messages to share with district leadership, Customer Service, Hank Clay.  
**WHO:** *Communications Team*  
**WHEN:** *Begun February, 25, 2013 and continuing*  
**STATUS:** *Ongoing*
2. The Director of Schools will visit student one morning each week. Communications staff will arrange to attend, make notes and email photos back to office for quick dissemination through Social Media.

Source: Metropolitan Nashville Public Schools Communications Department, February 2014.

During interviews with members of the executive leadership team and focus group sessions with elementary, middle, and high school principals, one of the most pervasive comments was the lack of communication throughout the School System.

Multiple members of the executive leadership team commented that the School System does not do a good job communicating its successes either internally or externally, including communicating the strategic plan to internal and external stakeholders.

Although survey results from central administrators and principals suggest internal and external communication is good, verbatim comments from interviews and focus groups suggest otherwise. In fact, one member of the executive leadership team commented that members of the executive leadership team should share responsibility for communicating Education 2018 to internal and external stakeholders.

**Exhibit 1-39** presents the relevant results of surveys of central administrators, principals and assistant principals, support staff, and teachers.

**Exhibit 1-39**  
**District Organization and Management Survey Results**  
**Internal and External Communication**

Question		Percentage Responses				
<i>A9. Internal communication regarding central administrative initiatives is good.</i>	<i>Number of Survey Respondents</i>	<b>Agree or Strongly Agree</b>	<b>Somewhat Agree</b>	<b>Disagree or Strongly Disagree</b>	<b>N/A</b>	<b>Total</b>
<b>Survey Group</b>						
Central Administrators	62	47%	31%	21%	2%	100%
Principals/Assistant Principals	104	58%	22%	19%	1%	100%
Support Staff	438	29%	30%	35%	6%	100%
Teachers	1,208	25%	32%	35%	8%	100%
Question		Percentage Responses				
<i>A10. External communication regarding central administrative initiatives is good.</i>	<i>Number of Survey Respondents</i>	<b>Agree or Strongly Agree</b>	<b>Somewhat Agree</b>	<b>Disagree or Strongly Disagree</b>	<b>N/A</b>	<b>Total</b>
<b>Survey Group</b>						
Central Administrators	62	48%	32%	16%	3%	100%
Principals/Assistant Principals	104	54%	31%	14%	2%	100%
Support Staff	438	29%	37%	29%	6%	100%
Teachers	1,208	25%	35%	33%	7%	100%

Source: McConnell Jones Lanier & Murphy LLP Surveys of Central Administrators, Principal/Assistant Principals, Support Staff, and Teachers, May 2014.

**Exhibit 1-39** also shows that only 47 percent of central administrators agree or strongly agree that internal communication of central administrative initiatives is good, and 48 percent agree or strongly agree that external communication regarding central administrative initiatives is good. The remaining percentages of central administrators are either not as certain internal and external communication is good, or disagree or strongly disagree that internal and external communication is good. Further, 58 percent of principals and assistant principals agree or strongly agree that internal communication is good, while 54 percent of principals and assistant principals agree or strongly agree that external communications is good.

The principals and assistant principals' responses sharply contrast with responses from support staff and teachers, who give internal and external communication low ratings. When asked whether internal and

external communications regarding central administrative initiatives is good, neither group’s response exceeded 30 percent in the agree or strongly agree category.

The survey responses appear to validate some degree of ineffective communication of central administrative initiatives, which includes the strategic plan. Ineffective communication of the School System’s long term strategic plan to internal and external stakeholders could cause confusion about School System priorities included in the plan and potentially diminish internal and external support to execute the strategies in the plan.

**RECOMMENDATION 1-Q.1**

**Develop a comprehensive plan to effectively communicate the School System’s five year strategic plan and other key initiatives to internal and external stakeholders.**

The director of schools should work with the assistant to the director of schools for Communications to develop a detailed, comprehensive communications plan to communicate the features and benefits of the School System’s five-year strategic plan. The communications plan should include the following elements for internal and external stakeholders included in **Exhibit 1-40**.

**Exhibit 1-40**  
**Elements of Communications Plan for Communicating**  
**Education 2018 to Internal and External Stakeholders**

Internal Stakeholders	External Stakeholders
<ul style="list-style-type: none"> <li>• Develop and communicate the shared vision in the strategic plan between the board and director of schools.</li> <li>• Schedule periodic meetings and visits to schools and departments by members of the executive leadership team to communicate the elements of the plan and priorities necessary to achieve goals in the plan.</li> <li>• Include a strategy for communicating the benefits of the strategic plan to students, teachers, support staff, principals, and other administrators.</li> <li>• Include a strategy for communicating successes and achievement gains because of initiatives in the plan to teachers, students, staff, and administrators.</li> <li>• Include a strategy for the Leadership and Learning Department to take the lead in communicating the elements of the strategic plan to school administrators and teachers.</li> </ul>	<ul style="list-style-type: none"> <li>• Engage the school board in communicating the vision for the strategic plan to the community.</li> <li>• Schedule meetings to “meet the community in the community” and convey the need for the strategic plan and the vision.</li> <li>• Include a strategy communicating the electronic access to information related to the strategic plan, including the School System’s website.</li> <li>• Include a strategy for communicating successes and achievement gains because of initiatives in the plan to parents, business leaders, civic groups, and churches.</li> <li>• Include media strategies and strategies for connecting with the external stakeholder community at the grass roots level.</li> </ul>

*Source: Adapted from “Communicating about School Reform,” a webinar series prepared by the Center on Innovation & Improvement, 3/26/2010.*

**FISCAL IMPACT**

The School System can implement this recommendation with existing resources.

**RECOMMENDATION 1-Q.2**

**Select a wide cross-section of parent, community members and business/civic partners and administer focus groups and surveys to them annually to obtain feedback regarding systemwide communications initiatives.**

The Communications Department should conduct a series of focus groups for community members to identify those channels/vehicles (e.g., interactive meetings, social media, electronic and print media) that have the greatest impact on improved communication. Potential focus group participants should be carefully screened to ensure that stakeholders from all segments of the community are involved.

Once the focus group data is collected, measurable goals and related strategies for improving systemwide internal and external communications should be refined and prioritized.

**RECOMMENDATION 1-Q.3**

**Evaluate the Communications Plan on an annual basis.**

The Communications Department should also evaluate the content, appeal, target audience (including the need for bilingual translation), frequency of distribution, and cost-effectiveness of all tools currently used by system and those that need to be explored. The Communications Department should then develop strategies to improve communication and raise awareness of community members.

The evaluation process should determine which programs are reaching the greatest number of people and the type of information being disseminated. In addition, the School System should report evaluation results and continuously refine and redevelop communications and community relations initiatives in order to realize improvements.

**FISCAL IMPACT**

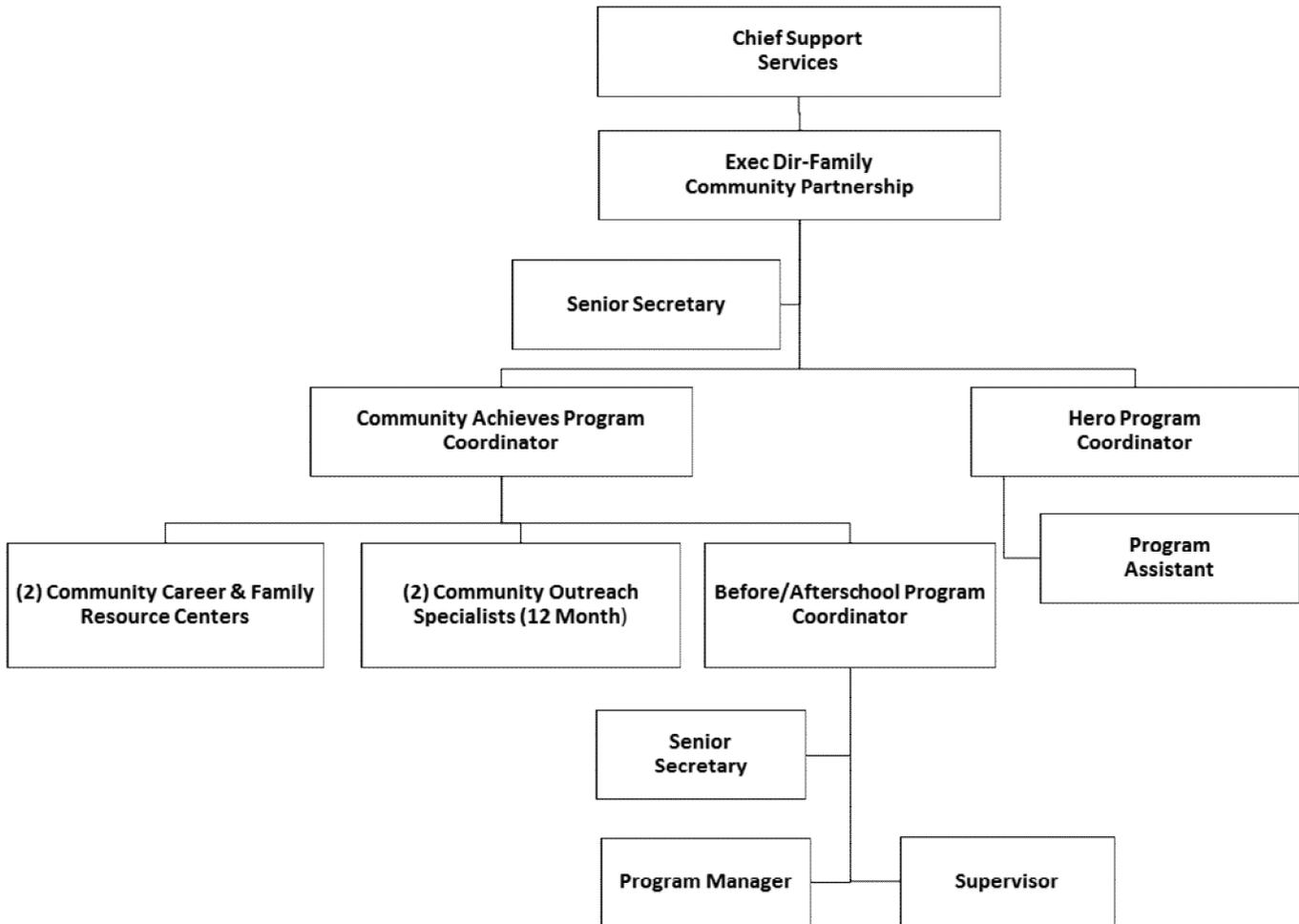
The School System can implement these recommendations with existing resources.

**COMMUNITY INVOLVEMENT**

Community involvement is essential to the success of a school system and the quality of life and development of its workforce. A successful community involvement program is designed so that it addresses both the unique characteristics of the school system and the community. A critical component of school improvement and accountability systems is a high level of community involvement. Community members and volunteers provide valuable resources that can enrich and enhance the overall educational system. In turn, community members directly benefit because they ultimately supply an informed citizenry, an educated workforce, and future community leaders.

The Family and Community Partnerships Department is responsible for the School System's community involvement functions. The department is staffed with 13 employees including an Executive Director of Family and Community Partnerships. **Exhibit 1-41** presents the current organization of the department.

**Exhibit 1-41**  
**Family and Community Partnership Department Organizational Chart**



Source: Metropolitan Nashville Public Schools, January 2014.

**Exhibit 1-42** below presents a summary overview of the organizational units and associated responsibilities for the School System’s Family and Community Partnerships Department.

**Exhibit 1-42**  
**Metropolitan Nashville Public Schools Organizational Units Responsible for Performing Major Family and Community Partnership Functions**

Organizational Unit	Major Functions
<b><i>Executive Director Family and Community Partnerships</i></b>	<ul style="list-style-type: none"> <li>• Directs School System partnerships with families, community organizations, governmental entities, foundations, and universities in support of student, family, and community success.</li> <li>• Oversees staff development and training, and support the work of Family Involvement Specialists and Community Outreach Specialists across the School System.</li> <li>• Directs all After School programs.</li> </ul>
<b><i>Senior Secretary</i></b>	<ul style="list-style-type: none"> <li>• Keeps the department head/principal informed about activities occurring within the department which could directly affect the operation. Provides direct administrative support for the department head/principal. Schedules and arranges meetings for the department head/principal.</li> <li>• Interprets policies, rules and regulations as needed.</li> <li>• Prepares directives and correspondence for the administrator’s signature. Handles confidential information.</li> </ul>
<b><i>Community Achieves Program Coordinator</i></b>	<ul style="list-style-type: none"> <li>• Coordinates the development and implementation of the Community Achieves strategic plan that reflects the alignment of services and programs in five key areas: Extended Learning, Parent and Family Engagement, Health and Wellness, Social Services and Adult Learning.</li> <li>• Establishes and promotes community partner engagement within the School System, such as community-based organizations, governmental entities, foundations, universities, families, and school in support of student, family, and community success.</li> <li>• Aligns student support services based on the academic and socio-emotional needs of students, families and schools. Work in conjunction with school staff to increase the capacity of each school to provide opportunities that promote the positive development of youth and families, and the improved academic performance of students.</li> </ul>
<b><i>Hero Program Coordinator</i></b>	<ul style="list-style-type: none"> <li>• Provides annual training on the educational rights of homeless students.</li> <li>• Assists with the enrollment of students in transition.</li> <li>• Provides federal law and School System policy as it pertains to homeless students.</li> </ul>
<b><i>Program Assistant</i></b>	<ul style="list-style-type: none"> <li>• Performs tasks and procedures relating to the School System’s programs and activities at Metropolitan Nashville Public Schools community centers. Recruits and manages partners provide services and trainings to the families.</li> <li>• Handles the logics and coordination of programs developed at each site. Schedules programs and events and assists with the planning, logistics and implementation of various School System activities at the community centers.</li> <li>• Monitors programming by collecting and organizing site data. Prepares accurate and timely reports about partnerships and service delivery.</li> </ul>

**Exhibit 1-42**  
**Metropolitan Nashville Public Schools Organizational Units Responsible for Performing**  
**Major Family and Community Partnership Functions (Cont'd)**

Organizational Unit	Major Functions
<b>Community Career and Family Resource Centers</b>	<ul style="list-style-type: none"> <li>• Arranges community gatherings and helping clients who need counseling.</li> <li>• Administers food banks, helping people obtain certain benefits and services, such as welfare, and aiding community members in accessing medical care.</li> </ul>
<b>Community Outreach Specialist</b>	<ul style="list-style-type: none"> <li>• Provides information and referral, counseling, short-term case work and case management services; case management responsibilities may include home visits to women with newborns; providing transportation and accompanying clients to medical and other community services when needed; maintaining up-to-date health assessments and progress notes on clients.</li> <li>• Speaks and transcribes language to non-English speaking clients. Works closely with public health nurses and the medical community to provide comprehensive healthcare.</li> <li>• Maintains contact with professionals of various health and human service agencies to determine client eligibility for services; assesses the case needs of each client; assists families in crisis or emergency; intervenes to insure safety of clients in abusive situations.</li> </ul>
<b>Before/After-school Program Coordinator</b>	<ul style="list-style-type: none"> <li>• Coordinates development, implementation and evaluation of the Metropolitan Nashville Public Schools before and after-school programs.</li> <li>• Provides accurate and timely local, state, and federal reports in compliance with grant reporting requirements.</li> <li>• Collaborates with school principals for the provision of services, including program design, hiring personnel, and use of facilities.</li> <li>• Designs Before and After School staff training and professional development. Develops procedures and policies for operation of the afterschool program. Develops and manages the program budgets.</li> <li>• Establishes and nurtures partnerships and engagement in Before and After School programs with community-based organizations, governmental entities, foundations, universities, families, and school sites in support of student success.</li> </ul>
<b>Senior Secretary</b>	<ul style="list-style-type: none"> <li>• Reviews and distributes mail, composes correspondence, and compiles documents. Assists with the development, management and reconciliation of the office's budget. Handles all equipment and supplies requests.</li> <li>• Collects, arranges and maintains confidential files. Maintains confidentiality of concerns from employees, parents, and community.</li> <li>• Makes initial review of complaints and inquiries and resolves issues that fall under delegated authority.</li> </ul>
<b>Program Manager</b>	<ul style="list-style-type: none"> <li>• Works with the executive director to plan and implement programs. Measures programmatic progress and evaluate its impact.</li> <li>• Assists in the maintenance of current partnerships with family and communities to support experiential learning programs.</li> <li>• Assists executive director with marketing and resource development to enhance program capacity and effectiveness.</li> </ul>
<b>Supervisor</b>	<ul style="list-style-type: none"> <li>• Supervises department's administrative staff and supervises the administrative functions for a large department.</li> <li>• Manages staff schedules and monitors office operations. Responsible for hiring and managing department's administrative staff.</li> </ul>

Source: Metropolitan Nashville Public Schools Family and Community Partnership Department.

**OBSERVATION 1-R**

**As noted in Accomplishment 1-J, the Family and Community Partnerships Department has implemented a host of academic and social support programs targeted to help students and families overcome impediments to both educational and personal success; while the department has assessed its programs through process evaluation, its evaluation system does not include cost-effectiveness measures to determine whether program outcomes justify the costs.**

The Family and Community Partnerships Department seeks to remove barriers to learning for all students, as well as support the staff at individual schools as they focus on improving instruction and increasing student achievement. The department utilizes an integrated focus on parent engagement, health and social services, youth and community development, and community engagement. By using this holistic approach to services, the department strives to meet the needs of student and families based on educational research that shows the following:

- student learning improves;
- parent and family participation in their children's education increase;
- principals and teachers have more time for quality instruction because the school's community partners help address non-academic barriers to learning; and
- families have more opportunities and support to care for and help educate their children, in addition to more opportunities to contribute to their community.

During the 2012-2013 School Year, the Family and Community Partnerships Department had the following goals, which included:

- increase needs-based school-level partnerships and collaboration;
- provide families with educational opportunities that support student achievement and success;
- create and provide professional development for educators that will result in meaningful engagement of families; and
- increase our capacity for parent engagement in the School System.

**Exhibit 1-43** summarizes the process that the department uses to evaluate the largest of its programs on a regular basis in order to continually assess the effectiveness and to modify and adjust them throughout the year to increase efficiency and impact. Summative data on the following programs is collected to facilitate the evaluation process as shown below:

**Exhibit 1-43**  
**Family and Community Partnerships Department**  
**2012-2013 Evaluation Process Summary**

Program	Evaluation Type/Information Gathered
Community Achieves	A program evaluator monitors outcome-driven results closely. Students are tracked in cohort groups by interventions and programs.
Parent University	Attendance and evaluations of all workshops and events are compiled bi-annually.
Poverty Simulations and Staff Professional Development	Attendance and evaluations of all workshops and events are compiled bi-annually.
Bringing Justice to You	Numbers of parents served and quantity of court costs waived for parents are compiled quarterly.
Before and After School Programs	Students enrolled in programs are placed in cohort groups and their attendance, discipline and academic achievement are monitored, and compared with the larger student population at the school as well as the School System.
HERO (Homeless Education and Resource Office)	Number of students enrolled in program, services rendered, and students are monitored through the Support and Intervention process at each school.
Family Resource Centers	Family Resource Centers monitor numbers of families served, types of services offered, and types of requests and referrals brought to them.

*Source: Metropolitan Nashville Public Schools Family and Community Partnerships Department, February 2014.*

The department uses the following methods to measure the success of its programs, which include the following:

- a scorecard has been designed to gauge the effectiveness of the four goals that are set each year;
- annual evaluations are reviewed (and maintained for multiple years) from parents who have attended Parent University sessions, as well as numbers of parents enrolled, and schools served;
- annual evaluations are reviewed (and maintained for multiple years) from professional development that has been offered to staff, as well as numbers of staff trained, and schools served; and
- cohort groups of students have been established to measure the impact of parents who attend Family Academic Success Team meetings. Initial findings reveal a strong correlation between student success and parent participation in the Family Academic Success Team meetings over the course of the year.

In addition, the department has partners that render many types of services at schools and who operate on a contractual basis with the School System. Partner organizations' evaluation processes and results are not always formally shared with the School System in a systematic manner; however, these results are discussed and considered in the overall evaluation process.

**Exhibit 1-44** below provides an overview of the Family and Community Partnerships Department progress towards each of its four goals from August 2012 through May 2013 and shows that Goals 1 and 2 were completed and progress was made toward Goals 3 and 4.

**Exhibit 1-44**  
**Family and Community Partnerships Department**  
**2012-2013 Internal Year-End Scorecard Report**

<b>Goal 1 – Complete</b>	<b>Accomplishments</b>
<i>To increase needs-based school-level partnerships and collaboration</i>	<ul style="list-style-type: none"> <li>• During the first semester of the 2012-2013 school year, 300+ community partners were secured to participate in one-time school or cluster functions by members of the Department.</li> <li>• Over 270 ongoing community partnerships were established by members of the team.</li> </ul>
<b>Goal 2 – Complete</b>	<b>Accomplishments</b>
<i>To promote and provide educational opportunities to families that support student achievement</i>	<ul style="list-style-type: none"> <li>• The department coordinated more than 60 uniquely titled workshops for parents by securing presenters from over 40 outside organizations. More than 2,000 parents participated in these workshops.</li> <li>• Members of the team also facilitated over 70 separately titled parent trainings serving over 5,500 additional parents.</li> <li>• Through ongoing partnerships with local radio programming, a number of informational sessions on topics ranging from parent engagement tips to school safety, and community programs were provided.</li> <li>• Partnerships with local radio also enabled an estimated 60,000 listeners to be reached.</li> <li>• The partnership with the faith-based community enabled the distribution of monthly newsletters to parents on a variety of different topics. School Notes was distributed to an estimated 70,600 parents at over 150 different churches throughout Nashville.</li> </ul>
<b>Goal 3</b>	<b>Accomplishments</b>
<i>To create and provide professional development for educators and technical assistance to schools that will result in meaningful engagement of families</i>	<ul style="list-style-type: none"> <li>• The department offered professional development trainings to over 1,600 Metropolitan Nashville Public Schools faculty and staff members during the 2012-2013 school year.</li> </ul>
<b>Goal 4</b>	<b>Accomplishments</b>
<i>To increase capacity for parent engagement in Metropolitan Nashville Public Schools</i>	<ul style="list-style-type: none"> <li>• Department team members worked with parents and school personnel to promote the value of Parent Connection.</li> <li>• Systemwide, there was a 14 percent increase in the number of active Parent Connection Accounts from September 2012 to May of 2013.</li> <li>• In addition to efforts to increase parent capacity through parent access and utilization to Parent Connection, Metropolitan Nashville Public Schools parents were encouraged to participate in parent leadership at the school and system level.</li> <li>• The department also assisted with the development of 11 parent support groups within the School System.</li> </ul>

Source: Department of Family and Community Partnerships, January 2014.

Although the School System was able to implement these programs relying only on its departmental budget (mainly salaries and personnel related costs), which was \$1,754,400 during the 2012-2013 school year; the department has not performed a fiscal assessment of its programs or an analysis of individual costs for each program.

**RECOMMENDATION 1-R.1**

**Include cost-effectiveness measures in the evaluation of the Family and Community Partnership Department's programs to ensure program outcomes justify resources used.**

The School System has allocated significant resources for academic and social support services through the Family and Community Partnerships Department. Working jointly with the Research, Assessment and Evaluation Department and applying the Return on Investment methodology the School System has been developing, the department should:

- develop cost-effective measures appropriate for its respective programs;
- specify the data that each program needs to collect for this analysis;
- design appropriate data collection tools and procedures for collecting these data;
- train staff in the data collection procedures;
- define the analytical techniques to be used and develop guidelines for interpretation of results; and
- test the methodology designed and refine it, as needed, and conduct cost-effectiveness evaluation component every three years to ensure program outcomes justify costs.

**FISCAL IMPACT**

The School System can implement this recommendation with existing resources.

**OBSERVATION 1-S**

**Interviews during the onsite visit with community partners revealed that some volunteers feel better communication and definition of roles and responsibilities could make volunteer efforts and effectiveness even stronger.**

The Family and Community Partnerships Department reported that they convene the School System's major community partners on a regular basis in a variety of smaller formats. Over 350 Academy partners meet in Partnership Councils, Community Achieves partners meet quarterly with their respective schools, and Alignment Nashville convenes 22 separate themed committees of community partners. According to the Family and Community Partnerships Department, all of these meetings are tied to very specific goals, timelines, roles and responsibilities, and, in some cases, program outcomes.

The review team conducted individual interviews and/or focus groups with several of the major parent and community involvement support organizations that plan and implement volunteer efforts in the School System. Many of the volunteer stakeholders stated that while their respective organizations work well together, periodic joint planning meetings would make them even more organized and productive. While all the organizations work together cooperatively to support the School System, areas of responsibility are often blurred and on occasion "needs gaps" occur because it is unclear which community partner will be responsible for certain activities.

**RECOMMENDATION 1-S.1**

**Convene a bi-annual meeting with all major community partners to plan and discuss goals, roles and responsibilities, and expected program outcomes.**

**FISCAL IMPACT**

The School System can implement this recommendation with existing resources.

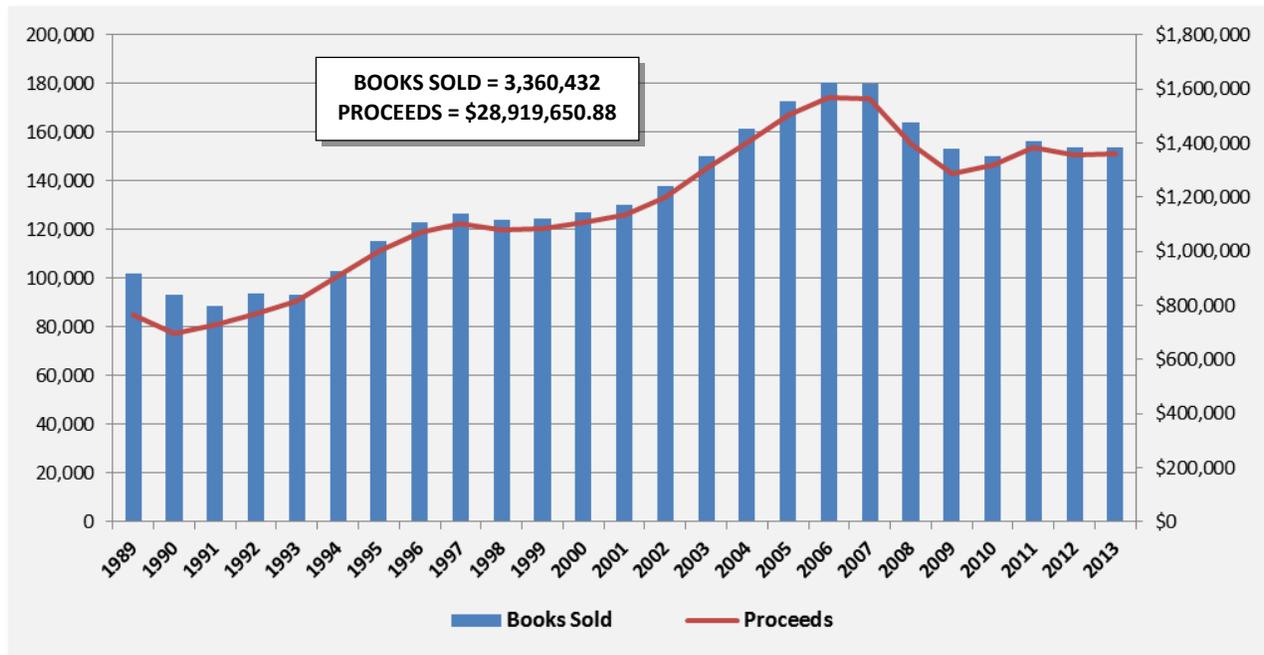
**OBSERVATION 1-T**

**The School System could benefit from additional fundraising sources utilized by another school system in the state.**

Identifying potentially successful opportunities to raise money to improve student academic performance is often challenging. During the onsite visit to the School System, a representative from the executive leadership of the PENCIL Foundation expressed interest in undertaking selling coupon books for the benefit of the School System. Knox County Public Schools has successfully executed this type of fundraiser for the past 25 years. A representative from the PENCIL Foundation indicated that they have the necessary contacts within the School System and community to make the fundraising venture a success.

From a historical perspective, Knox County Public Schools stakeholders have sold over 3,300,000 coupon books raising nearly \$29,000,000 to support educational initiatives. During the 2013 school year, the fundraiser generated just over \$1,300,000 and averages over \$1,000,000 in direct support annually. **Exhibit 1-45** depicts a summary of Knox County Public Schools’ 25 Year fundraiser coupon book sales.

**Exhibit 1-45**  
**Summary of Knox County Public Schools’ 25 Year Fundraiser Coupon Book Sales**



Source: Knox County Public Schools Website, June 2014.

Knox County Public Schools' Public Relations Office spearheads the fundraiser. The school system hires a private group to sell advertising in the form of a coupon book to local businesses throughout the Knoxville community offering discounts on products and services. The private group pays for the printing of the final published product.

The distribution of the coupon book is the primary selling point used to encourage advertisers to participate. The school system's students and stakeholders sell the coupon books, and the school system receives a percentage of the sales from all of the coupon books. The individual selling the coupon book is responsible for collecting the money at the point of sale. The school system does not incur operational or financial liability for the production of the coupon book.

As a fundraiser, the project is both "cost" and "time" effective. Local merchants, particularly small and medium-sized businesses, are motivated to participate because they understand that the distribution of their advertisements will reach a coveted market—parents and friends of school children. Ultimately, the sale of the coupon books is another vehicle to get community members involved in supporting the School System, while raising funds for the needs of students at the same time.

#### **RECOMMENDATION 1-T.1**

**Explore adopting a systemwide coupon book sale fundraiser to provide supplemental resources for school programs.**

If spearheaded by the PENCIL Foundation, this organization along with appointed central administration leadership and school personnel will be responsible for developing detailed operational protocols that include all administrative processes ranging from the recruitment of parent volunteers, student participants, promotional activities that encourage local merchant participation and the distribution of funds generated.

#### **FISCAL IMPACT**

The implementation of this recommendation would be categorized as revenue enhancement and, based on the longstanding fundraising successes of Knox County Public Schools can be estimated at \$1,000,000 annually.

## FISCAL IMPACT SUMMARY

RECOMMENDATION		2015–2016	2016–2017	2017–2018	2018–2019	2019–2020	TOTAL 5-YEAR (COSTS) SAVINGS/	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 1: DISTRICT ORGANIZATION AND MANAGEMENT</b>								
<b>1-A.1</b>	Provide targeted training for members of the board related to their roles and responsibilities in adhering to Policy Governance® to reduce the instances of board members' involvement in day-to-day operations that undermines the director of schools' authority.	(\$5,760)	(\$5,760)	(\$5,760)	(\$5,760)	(\$5,760)	(\$28,800)	\$0
<b>1-B.1</b>	Conduct a series of teambuilding workshops to improve trust and communication among board members to enhance board deliberations for efficient and effective decision-making.	(\$2,400)	(\$2,400)	(\$2,400)	(\$2,400)	(\$2,400)	(\$12,000)	\$0
<b>1-C.1</b>	Redesign the board's standing and ad hoc committee structure to reflect contemporary best practices for organizing school board committees to improve governing performance.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-D.1</b>	Complete the design of the board's performance dashboard to provide board members with a tool to monitor the initiatives related to student achievement and administrative, financial, and operational performance.	\$0	\$0	\$0	\$0	\$0	\$0	\$0

### FISCAL IMPACT SUMMARY (Cont'd)

RECOMMENDATION		2015–2016	2016–2017	2017–2018	2018–2019	2019–2020	TOTAL 5-YEAR (COSTS) SAVINGS/	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 1: DISTRICT ORGANIZATION AND MANAGEMENT</b>								
<b>1-E.1</b>	Modify existing processes within the Customer Service Center to establish a specific tracking, monitoring, and reporting protocol for handling board members' referrals of constituent matters.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-F.1</b>	Conduct a strategic planning retreat to re-engage the board in the strategic planning process to review the goals, objectives, and strategies included in Education 2018: Excellence for Every Student.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-G.1</b>	Develop specific strategies and tactics to include in the School System's internal communications plan to communicate key messages, initiatives, and directives from the executive leadership team meetings to the employees throughout the system.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-H.1</b>	Integrate teambuilding retreats into the cycle of periodic leadership development retreats scheduled for the executive leadership team to enhance relationship-building and collaboration.	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**FISCAL IMPACT SUMMARY (Cont'd)**

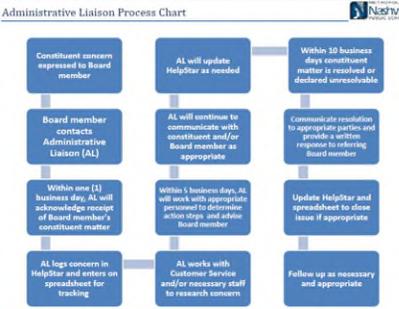
RECOMMENDATION		2015–2016	2016–2017	2017–2018	2018–2019	2019–2020	TOTAL 5-YEAR (COSTS) SAVINGS/	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 1: DISTRICT ORGANIZATION AND MANAGEMENT</b>								
<b>1-I.1</b>	Revise the format for monthly principals meetings to allocate time to obtain feedback from principals through two-way dialogue with the executive officers for elementary and secondary schools.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-J.1</b>	Modify the evaluation process for principals to require executive lead principals to conduct annual performance evaluations for building principals with input from network lead principals.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-K.1</b>	Communicate to principals how to access and use the common calendar on the School System’s website that codifies all meetings and events scheduled by central office departments to facilitate advance planning and schedule management.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-L.1</b>	Establish mandatory school-level advisory committees at all schools to allow school staff, parents, and community members representative of the school community to be involved in the system’s decision-making process.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-M.1</b>	Expand the types of school-level decisions principals can make during the School System’s three-year transition to school autonomy.	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**FISCAL IMPACT SUMMARY (Cont'd)**

RECOMMENDATION		2015–2016	2016–2017	2017–2018	2018–2019	2019–2020	TOTAL 5-YEAR (COSTS) SAVINGS/	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 1: DISTRICT ORGANIZATION AND MANAGEMENT</b>								
<b>1-N.1</b>	Use the Principals Leadership Institute to train principals to manage their schools once they achieve autonomy from the central office.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-O.1</b>	Evaluate the School System’s assistant principal staffing formula for inclusion of other relevant factors that may influence the assignment of assistant principals along with consideration of AdvancED recommended standards. Then, review assistant principal positions for optimal staffing levels.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-P.1</b>	Develop a comprehensive set of staffing guidelines for all support staff positions assigned to campuses that more accurately reflect not only student enrollments, but also other relevant factors that influence the assignment of support staff.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-Q.1</b>	Develop a comprehensive plan to effectively communicate the School System’s five year strategic plan and other key initiatives to internal and external stakeholders.	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**FISCAL IMPACT SUMMARY (Cont'd)**

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) SAVINGS/	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 1: DISTRICT ORGANIZATION AND MANAGEMENT</b>								
<b>1-Q.2</b>	Select a wide cross-section of parent, community members and business/civic partners and administer focus groups and surveys to them annually to obtain feedback regarding systemwide communications initiatives.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-Q.3</b>	Evaluate the Communications Plan on an annual basis.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-R.1</b>	Include cost-effectiveness measures in the evaluation of the Family and Community Partnership Department's programs to ensure program outcomes justify resources used.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-S.1</b>	Convene a bi-annual meeting with all major community partners to plan and discuss goals, roles and responsibilities, and expected program outcomes.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>1-T.1</b>	Explore adopting a systemwide coupon book sale fundraiser to provide supplemental resources for school programs.	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$5,000,000	\$0
<b>TOTALS-CHAPTER 1</b>		<b>\$991,840</b>	<b>\$991,840</b>	<b>\$991,840</b>	<b>\$991,840</b>	<b>\$991,840</b>	<b>\$4,959,200</b>	<b>\$0</b>

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
<b>Management of Metropolitan Nashville Public Schools should:</b>			
1-E.1	<p>Modify existing processes within the Customer Service Center to establish a specific tracking, monitoring, and reporting protocol for handling board members' referrals of constituent matters.</p>	<p><b>Partially Accept</b></p> <p>A. During the time the audit interviews were underway, MNPS was in the process of hiring someone to specifically manage/handle constituent matters submitted by the School Board. This person's role is to ensure the complaint feeds completely through the resolution/response loop and keeps the School Board member who submitted the issue well-informed of progress and/or resolution.</p> <ul style="list-style-type: none"> <li>○ The School Boards' Administrative Liaison started with MNPS in <b>July 2014</b>. A snapshot of the process followed is shown here. This protocol fully addresses recommendation 1-E.1 regarding tracking, monitoring, and reporting protocol for handling board members' referrals of constituent matters.</li> </ul>  <p>B. In addition to what is shared above, MNPS has also strengthened the way resolved constituent issues can be further heard after an appeal has been filed. On <b>Aug. 15, 2014</b>, Director of Schools Dr. Jesse Register appointed Chief Support Services Officer Dr. Tony Majors to chair the appeal board. The Constituent Appeal Board Hearings are fully documented for transparency of criteria utilized to base final decisions.</p> <p>C. MNPS defends that the protocol of the Customer Service Center (CSC) is sufficient to support submission of School Board member constituent complaints, but honors the request of the School Board members for a liaison specifically tied to their submissions. It is this defense that required the process managed by the Board's administrative liaison to align directly with the process and tools used by the CSC.</p> <ul style="list-style-type: none"> <li>○ Complaints officially submitted through the established structure (Customer Service Center), are tracked and addressed, with potential for a small margin of error. Even though the resolution may not always be the one sought by the constituent, MNPS is always open to feedback and looks for ways to continuously improve its processes to ensure they meet the specific needs and interests of its customers.</li> </ul>	<p>August 2014</p> <p>Position in place, constituent issue management process documented, and appeal board leadership named</p>

## Management Response

DISTRICT ORGANIZATION AND MANAGEMENT

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
1-G.1	Develop specific strategies and tactics to include in the School System's internal communications plan to communicate key messages, initiatives, and directives from the executive leadership team meetings to the employees throughout the system.	<p><b>Accept</b></p> <p>A. Weekly priorities/messages were consistently developed following each Executive Leadership Team (ELT) meeting starting at the beginning of the 2013-14 school year by the Assistant to the Director for Communications. These messages were then shared with the ELT and they in turn shared them with their direct reports, which included principals. Currently, this method of communication is being evaluated for effectiveness as part of the development of a strategic communications plan.</p> <p>B. Chief Officers regularly convene (normally weekly) individual leadership team meetings following ELT meetings to share system priorities and other cross-cutting issues for action.</p> <p>C. Monthly Principal meetings are held where the Director of Schools brings forward system priorities, political information that has implications for local and national education work, and any other themes that have arisen from the last exchange.</p> <p>D. Further expand/evaluate internal strategies as part of the communications plan.</p>	<p>Multiple communication methods were either expanded on or implemented during the 2013-14 school year.</p> <p>Communications Plan expected completion by June 2015</p>
1-H.1	Integrate teambuilding retreats into the cycle of periodic leadership development retreats scheduled for the executive leadership team to enhance relationship-building and collaboration.	<p><b>Accept</b></p> <p>Strategies for a highly effective team have always been embedded in Executive Leadership Team (ELT) retreats, but there have also been specific retreats designed to address this topic. For example, in January 2012, the ELT participated in a retreat that included topics such as:</p> <ul style="list-style-type: none"> <li>Overcoming the Five (5) Dysfunctions of a Team and</li> <li>Communicating to Build Understanding, Support, and Acceptance.</li> </ul> <p>In addition to the October date previously listed, there were specific teambuilding retreats held Oct. 29, 2012 and April 22, 2013.</p>	<p>Previous dates referenced: January 2012 to April 2013</p>
1-I.1	Revise the format for monthly principals meetings to allocate time to obtain feedback from principals through two-way dialogue with the executive officers for elementary and secondary schools.	<p><b>Accept</b></p> <p>The format of monthly principal meetings has been changed in 2014-15. Principals have two hours with the Director of Schools before moving into one-hour network meetings led by the lead principal. After lunch, principals move into a three-hour session organized by tiers and led by the executive officers. During this time, principals are meeting in small groups, whole group, and across tiers to have dialogue and discussion. Key principals are asked to facilitate and lead discussions and presentations.</p>	<p>Completed in 2014-15</p>

## Management Response

DISTRICT ORGANIZATION AND MANAGEMENT

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
1-J.1	Modify the evaluation process for principals to require executive lead principals to conduct annual performance evaluations for building principals with input from network lead principals.	<b>Reject</b> The majority of principals are members of a network of five schools led by a Network Lead Principal. The Network Lead Principal receives additional money and the equivalent of an assistant principal FTE to lead the network and evaluate the principals in the network. The district office staff was reduced to decentralize leadership decisions and give principals additional autonomy. This decentralized model, which began in 2013, is showing promise and will continue to develop to include all principals by SY 2016-2017.	N/A
1-K.1	Communicate to principals how to access and use the common calendar on the School System's website that codifies all meetings and events scheduled by central office departments to facilitate advance planning and schedule management.	<b>Accept</b> This recommendation will be incorporated into the new strategic communications plan currently in-development.	June 2015
1-L.1	Establish mandatory school-level advisory committees at all schools to allow school staff, parents, and community members representative of the school community to be involved in the system's decision-making process.	<b>Partially Accept</b> The school improvement planning (SIP) team is already required and in place at each school. The SIP team is comprised of teachers, administration, parents, students, and community members. Advisory committees already exist in all zoned high schools within the academy model. These advisory boards are comprised of students, teachers, and business partners. Further development of school level advisory committees is questionable; however, MNPS will work to further identify roles and responsibilities.	Implemented in 2010

## Management Response

DISTRICT ORGANIZATION AND MANAGEMENT

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
1-M.1	Expand the types of school-level decisions principals can make during the School System's three-year transition to school autonomy.	<b>Accept</b> During the 2013-14 school year, there were 17 schools (all I-Zone schools and schools led by a network lead principal) piloting school based budgeting. In 2014-15, all high school, middle school, and a few elementary school principals piloted school-based budgeting. These principals implemented budget flexibility and staffing during the two pilot years. All MNPS principals will implement student-based budgeting in 2015-16.	SY 2015-2016
1-N.1	Use the Principals Leadership Institute to train principals to manage their schools once they achieve autonomy from the central office.	<b>Partially Accept</b> The Principal Leadership Institute (PLI) is more than training for budget autonomy. The PLI is designed to share best practices, innovative ideas, new programs, leadership development, and development of instructional capacity. Principals have autonomy in budget flexibility and staffing and have monthly professional development to share best practices, exchanges ideas, and discuss managerial aspects of the principal job at monthly principal meetings.	PLI was implemented in 2009. Professional development conducted monthly.
1-O.1	Evaluate the School System's assistant principal staffing formula for inclusion of other relevant factors that may influence the assignment of assistant principals along with consideration of AdvancED recommended standards. Then review assistant principal positions for optimal staffing levels.	<b>Reject</b> MNPS follows a staffing formula as the baseline for allocating assistant principals based on the number of students enrolled in the building. Staffing is reviewed annually for every school during the budget process. Principals have autonomy over their budgets and may choose to purchase additional assistant principals above the staffing allocation. Also, the district considers programmatic needs, economically disadvantaged populations, exceptional education needs, and academic achievement when assigning additional assistant principal positions. Principals who are selected as Network Lead Principals are also allocated a position equivalent to an assistant principal to use in the building as needed. This allows the lead principal to be out of the building working with schools in his/her network. Following a rigid staffing formula would not provide principals flexibility in their staffing or allow the district to assign additional assistant principals based on need.  The audit report specifically states, "AdvancED's recommended staffing levels for assistant principals are by no means prescriptive; they clearly serve as a benchmark for comparison to determine <b>minimum</b> administrative staffing levels." MNPS assistant principals are not only performing administrative functions, but primarily act as instructional leaders. This "minimum" staffing level cited does not include all the staffing considerations MNPS listed above like economically disadvantaged populations and exceptional education needs.	N/A

## Management Response

DISTRICT ORGANIZATION AND MANAGEMENT

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
1-P.1	Develop a comprehensive set of staffing guidelines for all support staff positions assigned to campuses that more accurately reflect not only student enrollments, but also other relevant factors that influence the assignment of support staff.	<b>Partially Accept</b> Beginning in SY15-16, the majority of school-based positions – support, certificated, and certificated administration – will no longer be assigned directly to the majority of schools. MNPS is transitioning to a model of school-level flexibility and student-based budgeting where schools will receive an allocation of resources (dollars, not positions) based on the number and type of students they serve. Principals will have the flexibility to determine the mix of staff positions in their building, within certain parameters. MNPS will develop guidance for principals on recommended and, in some cases, non-negotiable staffing levels for certain certificated and support positions.	SY 2015-2016
1-Q.1	Develop a comprehensive plan to effectively communicate the School System’s five-year strategic plan and other key initiatives to internal and external stakeholders.	<b>Partially Accept</b> This recommendation will be incorporated into the new strategic communications plan currently in development. However, communications regarding the strategic plan to date have been embedded in internal and external publications, meeting agendas/work sessions, board presentations, Director of School’s and other leaders’ presentations to various audiences (including parents), as well as school-level and departmental strategic action plans. The strategic plan was also a major component of the online module-based training completed by at least 98% of MNPS teachers over the course of 6+ months in 2014 and continues to be consistently shared in the same online training for all new teachers.	Strategic Communications Plan Completion June 2015
1-Q.2	Select a wide cross-section of parent, community members and business/civic partners and administer focus groups and surveys to them annually to obtain feedback regarding system-wide communications initiatives.	<b>Accept</b> This recommendation will be incorporated into planning and development of district’s new strategic communications plan.	June 2015
1-Q.3	Evaluate the Communications plan on an annual basis.	<b>Accept</b> This recommendation will be a component of the timeline built into the district’s new strategic communications plan for the evaluation of the plan/work.	June 2015

## Management Response

DISTRICT ORGANIZATION AND MANAGEMENT

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
1-R.1	Include cost-effectiveness measures in the evaluation of the Family and Community Partnership Department programs to ensure program outcomes justify resources used.	<b>Accept</b> The Department of Family and Community Partnerships currently evaluates all events, but MNPS agrees a more comprehensive annual assessment of the department is needed and should be developed.	July 2015
1-S.1	Convene a bi-annual meeting with all major community partners to plan and discuss goals, roles and responsibilities and expected program outcomes.	<b>Accept</b> The Support Services Department currently meets with community agencies engaged in the Community Achieves process three to four times per year, but this convening does not effectively reach all community partners working with the district. This observation would most effectively be accomplished as a function of the School Board's Community Engagement Committee.	August 2015
1-T.1	Explore adopting a system-wide coupon book sale fundraiser to provide supplemental resources for school programs.	<b>Reject</b> Decision-making around which fundraisers should or should not be conducted are made autonomously by each school leader in conjunction with his/her school leadership teams and supporting parent/community organizations.  During a principals' meeting in early 2014, a presentation regarding sale of a coupon book was made to all principals as an option for participation. Principals would have to decide if the opportunity warranted further exploration or presentation to their schools.	N/A

## Board of Education Member Response – Tyese Hunter

DISTRICT ORGANIZATION AND MANAGEMENT

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
<b>The Metropolitan Nashville Public Schools Board of Education should:</b>			
1-A.1	Provide targeted training for members of the board related to their roles and responsibilities in adhering to Policy Governance® to reduce the instances of board members’ involvement in day-to-day operations that undermines the director of schools’ authority.	<b>Accept</b>	
1-B.1	Conduct a series of teambuilding workshops to improve trust and communication among board members to enhance board deliberations for efficient and effective decision-making.	<b>Accept</b>	
1-C.1	Redesign the board’s standing and ad hoc committee structure to reflect contemporary best practices for organizing school board committees to improve governing performance.	<b>Accept</b>	
1-D.1	Complete the design of the board’s performance dashboard to provide board members with a tool to monitor the initiatives related to student achievement and administrative, financial, and operational performance.	<b>Accept</b>	
1-F.1	Conduct a strategic planning retreat to re-engage the board in the strategic planning process to review the goals, objectives, and strategies included in Education 2018: Excellence for Every Student.	<b>Accept</b>	

## Board of Education Member Response – Mary Pierce

DISTRICT ORGANIZATION AND MANAGEMENT

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
<b>The Metropolitan Nashville Public Schools Board of Education should:</b>			
1-A.1	Provide targeted training for members of the board related to their roles and responsibilities in adhering to Policy Governance® to reduce the instances of board members' involvement in day-to-day operations that undermines the director of schools' authority.	<b>Accept</b>	June 2015
1-B.1	Conduct a series of teambuilding workshops to improve trust and communication among board members to enhance board deliberations for efficient and effective decision-making.	<b>Accept</b>	Now through December 2015
1-C.1	Redesign the board's standing and ad hoc committee structure to reflect contemporary best practices for organizing school board committees to improve governing performance.	<b>Accept</b>	Done
1-D.1	Complete the design of the board's performance dashboard to provide board members with a tool to monitor the initiatives related to student achievement and administrative, financial, and operational performance.	<b>Accept</b>	April 2015
1-F.1	Conduct a strategic planning retreat to re-engage the board in the strategic planning process to review the goals, objectives, and strategies included in Education 2018: Excellence for Every Student.	<b>Accept</b>	February/March 2015

## Board of Education Member Response – Will Pinkston

DISTRICT ORGANIZATION AND MANAGEMENT

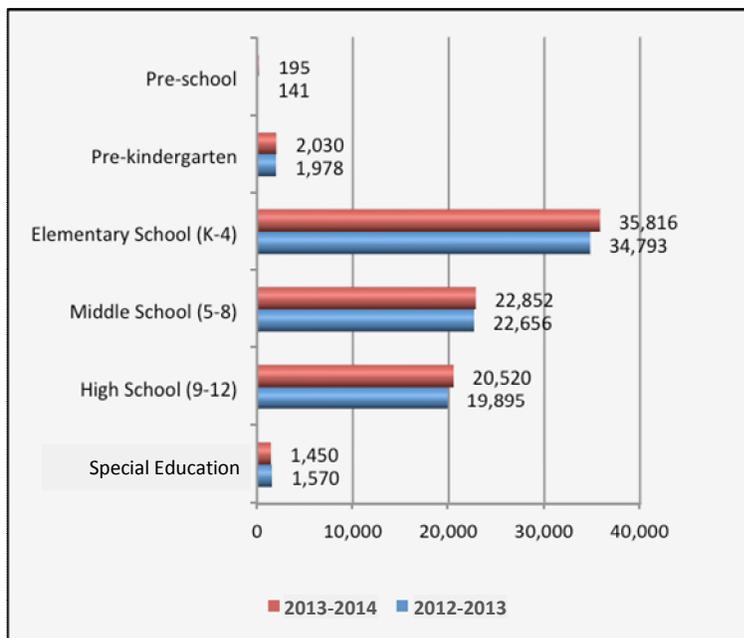
	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
<b>The Metropolitan Nashville Public Schools Board of Education should:</b>			
1-A.1	Provide targeted training for members of the board related to their roles and responsibilities in adhering to Policy Governance® to reduce the instances of board members' involvement in day-to-day operations that undermines the director of schools' authority.	<b>Partially accept.</b> If there are instances of board members interfering in the school system's day-to-day operations, then training should be directed at individual board members, versus the whole board.	
1-B.1	Conduct a series of teambuilding workshops to improve trust and communication among board members to enhance board deliberations for efficient and effective decision-making.	<b>Reject.</b> Some board members have competing agendas driven by special interests and/or community concerns. Trust-building workshops are not going to solve that challenge.	
1-C.1	Redesign the board's standing and ad hoc committee structure to reflect contemporary best practices for organizing school board committees to improve governing performance.	<b>Accept.</b> I like this recommendation and, in fact, this work already has begun.	
1-D.1	Complete the design of the board's performance dashboard to provide board members with a tool to monitor the initiatives related to student achievement and administrative, financial, and operational performance.	<b>Accept.</b> Let's ensure alignment with the director's evaluation tool, which is in the process of being redesigned.	
1-F.1	Conduct a strategic planning retreat to re-engage the board in the strategic planning process to review the goals, objectives, and strategies included in Education 2018: Excellence for Every Student.	<b>Partially Accept.</b> This should occur following the appointment of a new director, with an eye toward granting the new leader the leeway to develop his or her own ideas in collaboration with the board.	

## CHAPTER 2 – EDUCATIONAL SERVICE DELIVERY

### BACKGROUND

Metropolitan Nashville Public Schools (the School System) is the 42nd largest urban School System in the nation, covering the city of Nashville and Davidson County, an area of approximately 533 square miles. The School System had 81,033 students in 2012-2013 and 82,863 students at the start of 2013-2014. The distribution of students by school level is shown in **Exhibit 2-1**.

**Exhibit 2-1**  
**Number of Students by School Level**  
**2012-2013 and 2013-2014\***



Source: Metropolitan Nashville Public Schools 2012-2013 Facts and 2013-2014 Facts.

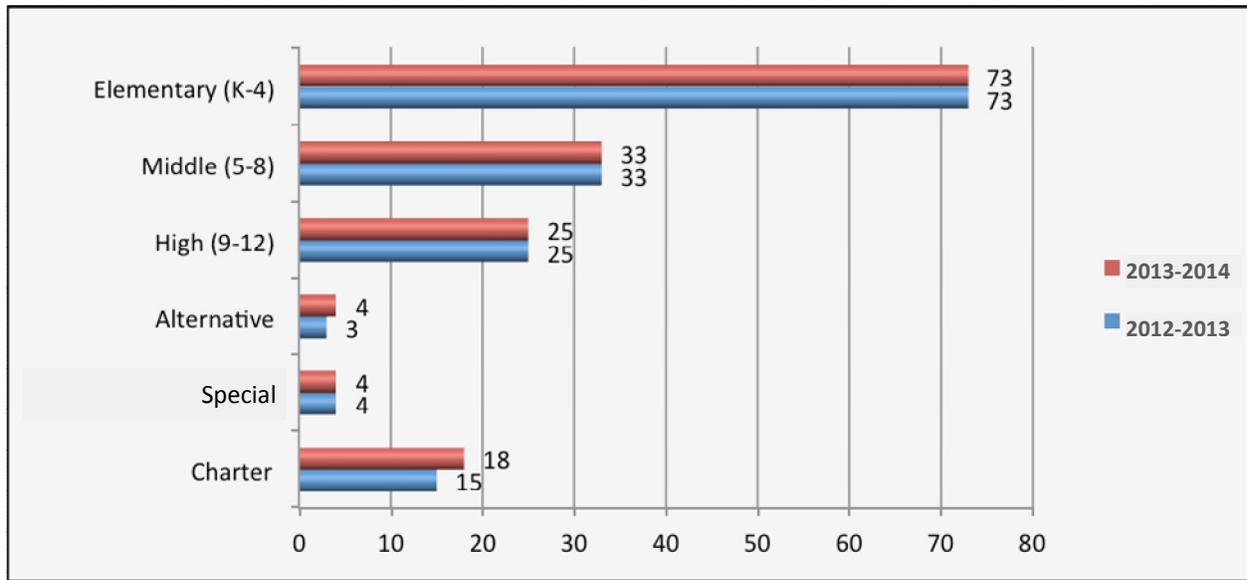
\*2013-2014 data reflect the 20-day count.

### CHAPTER HIGHLIGHTS

- The School System has developed an innovative process for determining the extent to which each campus is providing a high-quality education for students.
- Planned expansion for Pre-K is research-based and should provide positive long-term effects for participants.
- The Career Technical Education program offers courses in a wide range of high-skill/wage/demand occupations and is supported by extensive business participation and university partnerships.
- A comprehensive student, teacher, and school data warehouse has been created that is used to inform decisions and guide instruction.
- Improving the ratio of high-poverty to low-poverty populations in K-8 schools can result in improved academic achievement of low income students.
- Implementing proven behavior management strategies will improve overall discipline. It will also reduce racial disparities in discipline and in disproportional assignments to alternative learning centers.
- Continued development and improvement of support structure, staff, curriculum, and instructional strategies will increase the language proficiency and academic preparedness of English language learners.

The School System had 153 campuses in 2012-2013 and 157 campuses in 2013-2014. **Exhibit 2-2** reflects the number of campuses by school level.

**Exhibit 2-2**  
**Number of Schools by School Level**  
**2012-2013 and 2013-2014\***

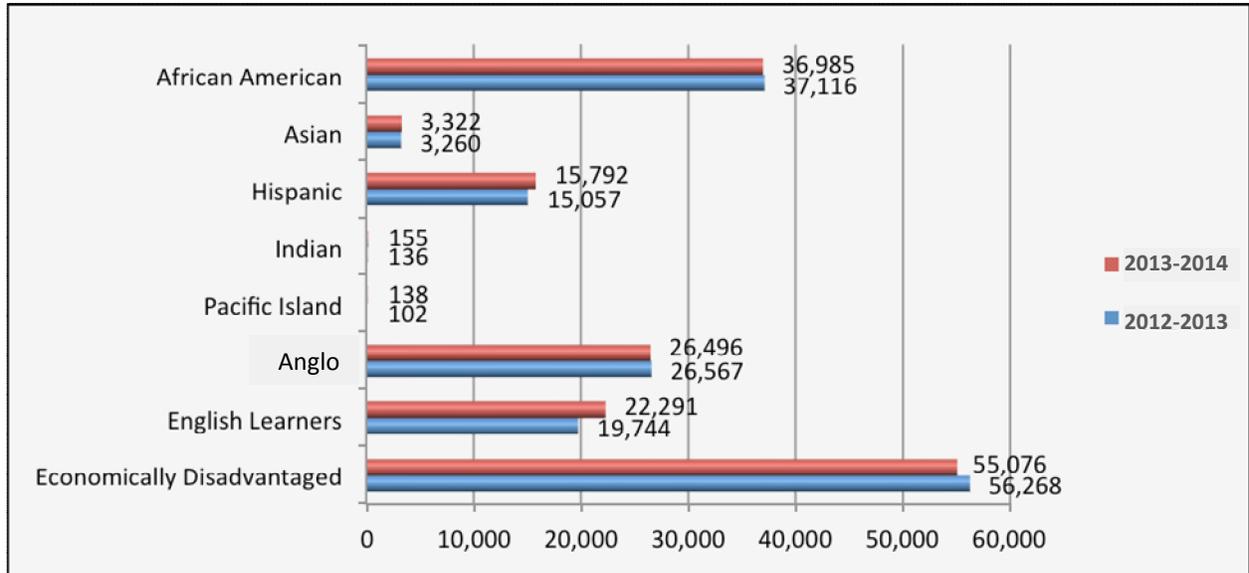


Source: Metropolitan Nashville Public Schools 2012-2013 Facts and 2013-2014 Facts.

\*2013-2014 data reflect the 20-day count.

The School System is diverse, serving students from 120 countries speaking as many different languages. In addition, a high percentage of economically disadvantaged and exceptional needs students are represented in the system. African American students comprise the largest population group with 45.8 percent in 2012-2013 and 45.0 percent in 2013-2014, followed by Caucasian students who comprised 33.3 percent in 2012-2013 and 32.0 percent in 2013-2014. Hispanic students constituted 16.6 percent in 2012-2013 and 19.0 percent in 2013-2014. About two-thirds of the students were economically disadvantaged in 2012-2013 and 2013-2014: 69.4 percent and 66.5 percent, respectively. About one-quarter of the students are English Language Learners: 24.0 percent in 2012-2013 and 26.9 percent in 2013-2014, as shown in **Exhibit 2-3**.

**Exhibit 2-3**  
**Student Demographics**  
**2012-2013 and 2013-2014\***



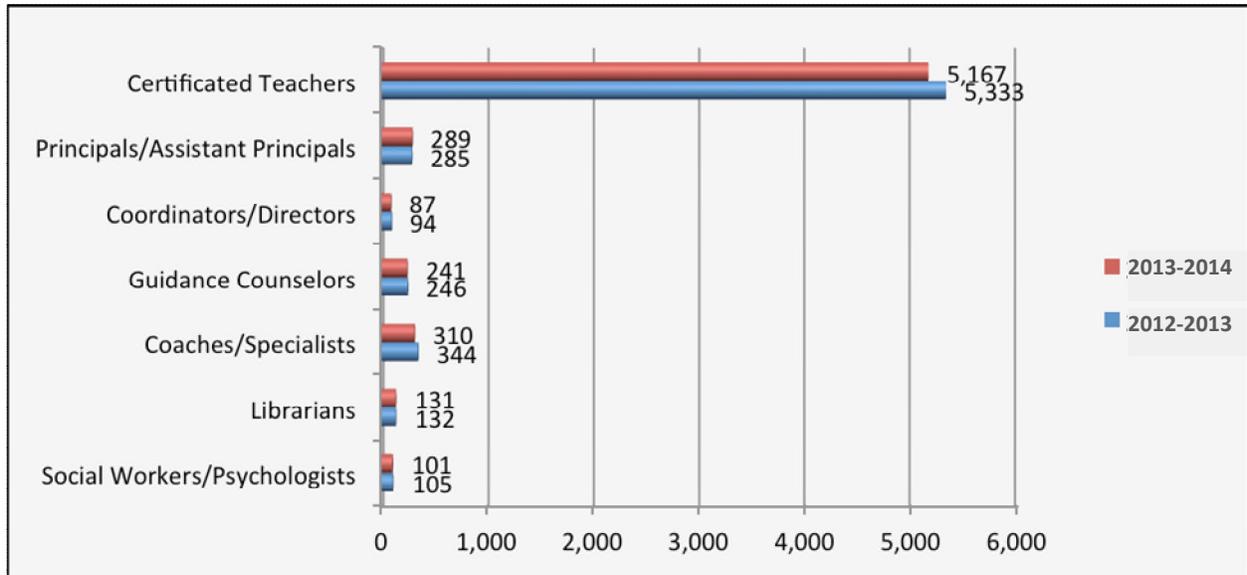
Source: Metropolitan Nashville Public Schools 2012-2013 Facts and 2013-2014 Facts.

\*2013-2014 data reflect the 20-day count.

In its effort to promote diversity in its schools, the School System has established a process in which students can apply to 82 of its non-zoned magnet and optional schools on a space-available basis. Transportation is provided through the Metropolitan Transit Authority for students who qualify for the federal free/reduced price meal program and to students with disabilities, in accordance with their Individualized Education Plan. All charter schools are open to enrollment by any student living in Davidson County with transportation provided. The School System also provides 'zoned-option' areas in which students may transfer from their attendance zone school to another school with transportation provided.

The School System had 5,333 certificated teachers in 2012-2013; in 2013-2014 the number of teachers declined 3.1 percent to 5,167. Nearly all the teachers, 99.8 percent, are highly qualified. **Exhibit 2-4** shows the number of certificated staff by category.

**Exhibit 2-4  
Number of School Certificated Staff  
2012-2013 and 2013-2014\***



Source: Metropolitan Nashville Public Schools 2012-2013 Facts and 2013-2014 Facts.

\*2013-2014 data reflect the 20-day count.

Teachers' years of experience varied by school level, as shown in **Exhibit 2-5**. On average, the School System's elementary school teachers had the greatest number of years of experience while high school teachers had the least.

**Exhibit 2-5  
Certificated Teachers  
2012-2013 and 2013-2014\***

Teachers	2012-2013	2013-2014*
Certificated Teachers	5,333	5,167
<b>Average Years of Experience</b>		
Elementary Schools	11.95 years	11.54 years
Middle Schools	10.82 years	10.89 years
High Schools	9.90 years	10.84 years

Source: Metropolitan Nashville Public Schools 2012-2013 Facts and 2013-2014 Facts.

\*2013-2014 data reflect the 20-day count.

The School System spent 73.1 percent of their operating budget on academics in 2012-2013, and 70.6 percent in 2013-2014 as shown in **Exhibit 2-6**. Between 13.4 percent of its budget in 2012-2013, and 11.3 percent in 2013-2014, came from federal funds.

**Exhibit 2-6  
Budget 2012-2013 and 2013-2014\***

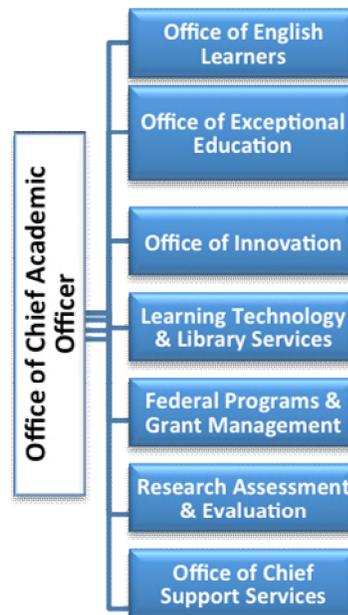
	2012-2013	2013-2014*
Total Operating Expenditure Budget	\$720,420,300	\$746,420,300
Curriculum and Instruction	\$491,684,600	\$527,031,800
Percent of Operating Budget	73.1%	70.6%
Federal Funds (Grants)	\$96,272,000	\$84,598,000
Percent Federal Funds (Grants)	13.4%	11.3%

Source: Metropolitan Nashville Public Schools 2012-2013 Facts and 2013-2014 Facts.

\*2013-2014 data reflect the 20-day count.

**Exhibit 2-7** depicts the School System’s educational service delivery organization and the number of administrators and staff.

**Exhibit 2-7  
Metropolitan Nashville Public Schools Educational Service Delivery Organizational Chart and Staffing  
2013-2014**



Source: Metropolitan Nashville Public Schools Office of Chief Academic Officer, February 2014.

**Exhibit 2-7  
Educational Service Delivery Chart and Staffing 2013-2014**

Staffing	Office of Chief Academic Officer	Office of English Learners	Office of Exceptional Education	Office of Innovation	Learning Technology & Library Services	Federal Programs & Grant Management	Research Assessment & Evaluation
<b>Leadership</b>	<b>Chief Academic Officer</b>						
Executive Officers	3			1			
Executive Directors	7	1	1		1	1	1
Directors	7	1	3	2		2	
Coordinators	5	8	6	4	3	1	7
Managers				1	1	3	
Lead Principals	6						
Leader Principals				10			
Lead Librarian					1		
Instructional Designer				10	5		
Transformation Facilitators				7			
School improvement Program Facilitators						9	
Coaches		8	33.5				12
Specialists		8		1	4	4	
Analysts						1	1
Librarians					130		
Library Aides					81.5		
Counselors	212						
Speech Pathologists			80.5				
Occupational Therapists			31.5				
Other Special Education Professionals			2.5				
Special Education Teachers			602.6				
Homebound Teachers			8				
Itinerant Teachers		29	27				
Interpreters for the Deaf			18				
Technology Trainer			1		2		
Paraprofessionals/Aides			543				
Assessors		6					
Translators		47					
Administrative Assistants	5	1	3	1		3	2
Secretaries	10	1		1	1	3	
Campus Support Staff							
Other staff	8	3			3		3

Source: Metropolitan Nashville Public Schools Organizational Charts, February 2014.

To meet the needs of its students, the School System serves students from pre-school through Grade 12 in a variety of grade configurations as shown in **Exhibit 2-8** and offers a variety of academic programs plus a large number of extracurricular and athletic programs. Twenty traditional schools—seven at the elementary level, eight at the middle school level, and five at the high school level—also have magnet school programs. Academic program offerings include multiple Advanced Placement courses and an International Baccalaureate Programme; the Cambridge international education programme at all three levels: ninth grade and theme-based academies at all 12 zoned high schools; and charter, magnet, specialty, and optional enrollment schools at all levels. The International Baccalaureate Programme is currently offered in nine schools—two elementary schools, five middle schools, and two high schools—with the newly created International Baccalaureate Career-related Certificate also offered at one of the two high schools. In addition, the application for authorization as a World School will be submitted in July 2014 by a third high school. To serve students who need a more non-traditional learning environment, the School System provides alternative learning centers for those with behavioral issues, three high schools serving students ages 17 to 21, and for students ages 19 and up. The district also offers Cambridge courses in seven schools – one elementary school, two middle schools, and four high schools. Students at the Cambridge high schools will have the opportunity to complete course requirements in order to achieve the Advanced International Certificate of Education (AICE) Diploma.

**Exhibit 2-8  
Grade Configurations of Metropolitan Nashville Public Schools**

Grade Configuration	Traditional Schools	Specialty Schools	Charter Schools	Total
PreSchool-4	2			2
Pre-K Only		1		1
PreK-4	55			55
PreK-5	2	1		3
PreK-12		1		1
K only			2	2
K-2			1	1
K-4	13		1	14
K-5	1			1
K-6			1	1
K-8		1		1
K-12		1		1
5 only			3	3
5-6			1	1
5-7			3	4
5-8	31	1	4	36
5-12	1			1
6-8	1			1
7-8	1		1	2
7-12	1			1
8 only	1			1
9-10	1			1
9-12	17	2	1	20
10-12	1			1
11-12	3			3
<b>Total</b>	<b>131</b>	<b>8</b>	<b>18</b>	<b>157</b>

Source: Metropolitan Nashville Public School 2013-2014, Revised 3-10-14 and Metropolitan Nashville Public Schools School Option: Apply.

Beginning in 2006, the School System began a redesign of its 12 zoned high schools into small learning communities, emphasizing project-based instruction as one of its primary initiatives to prepare students for college and career. In addition to a ninth grade academy, each high school has between one and five 'career cluster' academies in grades 10-12, developed in partnership with civic and business organizations shown in **Exhibit 2-15**. The academies are grouped into five categories: Arts, Media and Communications; Business, Marketing and Information Technology; Engineering, Manufacturing, and industrial Technology; Health and Public Services; and Hospitality and Tourism.

The Tennessee Department of Education has established measurable goals for the improvement of education in the state's school systems and uses various data to monitor progress. The goal is to raise student achievement and reduce the achievement gaps among and between student groups. The Tennessee Value-Added Assessment System measures student progress within a grade and subject, demonstrating the influence the school has on students' performance. The Tennessee Comprehensive Assessment Program compiles data on state and district-level 3-8 achievement, high school End-of-Course examinations, and achievement gap results. The state department produces an annual Report Card which provides a variety of state, district, and school-level data including demographics, achievement results, accountability progress, value-added data, attendance data, graduation rates, and average American College Test composite and subject scores.

Students in Grades 3-8 take the Tennessee Comprehensive Assessment Program achievement test. It is a timed, multiple choice assessment that measures skills in reading, language arts, math, science, and social studies. High school students take End-of-Course exams in Algebra I and II; Biology I; English I, II, and III; and US History. The results of the End-of-Course exams are factored into students' final grades at a percentage determined by the State Board of Education, currently set at 25 percent. Students are not required to pass any one exam but must achieve a passing score for the course. The 2012-2013 test results indicate that the percent of the School System's students that tested 'below basic' and 'basic' was higher (less desirable) than the percent of students statewide on all subjects tested on both the Tennessee Comprehensive Assessment and the End-of-Course exams. The percent of the School System's students scoring 'proficient' and 'advanced' was also lower than the percent of students statewide on both type assessments as illustrated in **Exhibit 2-9**.

**Exhibit 2-9  
Tennessee Comprehensive Assessment Program and End-of-Course Results  
State and Metropolitan Nashville Public Schools**

Grades 3-8							
		Percent Below Basic	Percent Basic	Percent Proficient	Percent Advanced	Percent Prof/Adv	Gain Prof/ Adv 2011- 2012 to 2012-2013
<b>State</b>	Math	15.6	33.7	30.3	20.4	50.7	na
	Read/LA	11.9	37.8	38.5	11.8	50.3	na
	Science	14.2	23.2	44.1	18.5	62.6	na
	Social Studies	0.0	15.2	41.1	43.7	84.8	na
<b>Metropolitan Nashville Public Schools</b>	Math	21.1	36.5	26.8	15.6	42.4	3.0
	Read/LA	17.0	43.1	31.3	8.6	39.9	(0.7)
	Science	23.9	30.3	35.7	10.1	45.8	0.9
	Social Studies	0.0	23.8	46.2	30.0	76.2	0.8
Grades 9-12							
<b>State</b>	Algebra I	15.5	24.2	30.6	29.7	60.3	na
	Algebra II	24.0	34.0	28.6	13.4	42.0	na
	Biology I	15.5	22.2	45.6	16.7	62.3	na
	English I	8.8	23.1	55.1	13.0	68.1	na
	English II	10.5	30.0	49.2	10.3	59.5	na
	English III	22.6	37.8	26.4	13.2	39.6	na
	US History	0.0	3.9	47.2	48.9	96.1	na
	<b>Metropolitan Nashville Public Schools</b>	Algebra I	21.0	27.6	31.4	20.0	51.4
Algebra II		43.3	32.5	17.7	6.5	24.2	7.1
Biology I		26.9	26.9	38.2	8.0	46.2	8.9
English I		14.8	28.8	47.8	8.6	56.4	1.8
English II		15.5	37.0	40.6	6.9	47.5	(1.2)
English III		34.7	39.8	18.8	6.7	25.5	3.8
US History		0.0	0.0	63.0	28.1	91.1	2.0

Source: Report Card; Tennessee Department of Education.

To compete in today's technology-based economy, many well-paying jobs now require some postsecondary education. In many instances, however, students desiring to pursue college work find it difficult due to discrepancies between their educational goals and the courses completed in high school. As a result, efforts are being made to improve the college and career readiness of high school graduates such as the development of the Common Core State Standards. States and school systems are placing greater importance on college readiness assessments such as the American College Test (ACT) and the Scholastic Assessment Test (SAT). Every high school student in Tennessee is required to take the American College Test in grades 11 and 12. The American College Test also provides two additional assessments of college readiness and academic performance, EXPLORE at grade 8 and PLAN at grade 10. Beginning in 2014-2015, ASPIRE, a new assessment designed to follow students from the elementary grades through early high school, will begin replacing EXPLORE and PLAN as the ACT college readiness assessment system.

The American College Test has established ‘readiness benchmarks’ for its subject-area tests. The benchmarks represent the level of achievement for students to have a 50 percent chance of making a B or higher or about a 75 percent chance of making a C or higher in ‘corresponding credit-bearing first-year college courses.’ The college courses and corresponding benchmark for the test given in grades 11 and 12 are English Composition (18), College Algebra (22), Social Sciences (22), and Biology (23). The School System has established a target in its strategic plan of increasing the percent of grade 3-8 students on track for 21 or higher on the American College Test Composite from 15 percent in 2011-2012 to 40 percent in 2017-2018. The target for the percent of seniors scoring 21 or higher is 50 percent, up from 29 percent in 2011-2012.

The 3-year average scores in 2010 and 2013 of the School System’s students were lower than those of students statewide in all subjects tested on both the Tennessee Comprehensive Assessment Program and the American College Test. The net change in the 3-year averages from 2010 to 2013 was better than or equal to those statewide in math, reading, and social studies but worse in science shown in **Exhibit 2-10**.

**Exhibit 2-10**  
**Tennessee Comprehensive Assessment Program and ACT Scores**  
**State and Metropolitan Nashville Public Schools 2009-2010 to 2012-2013**

	2009-2010	2012-2013	Net Change
<b>State</b>			
Math 3-Year Average	49	55	6
Reading 3-Year Average	49	51	2
Social Studies 3-Year Average	51	56	5
Science 3-Year Average	49	52	3
ACT 3-Year Composite	19.5	19.0	(0.5)
ACT 3-Year English Average	19.3	18.7	(0.6)
ACT 3-Year Math Average	18.9	18.7	(0.2)
ACT 3-Year Reading Average	19.7	19.3	(0.4)
ACT 3-Year Science Average	19.4	19.1	(0.3)
<b>Metropolitan Nashville Public Schools</b>			
Math 3-Year Average	44	50	6
Reading 3-Year Average	43	46	3
Social Studies 3-Year Average	44	49	5
Science 3-Year Average	45	45	0
ACT 3-Year Composite	18.7	18.2	(0.5)
ACT 3-Year English Average	18.5	17.8	(0.7)
ACT 3-Year Math Average	18.1	17.8	(0.3)
ACT 3-Year Reading Average	18.9	18.4	(0.5)
ACT 3-Year Science Average	18.9	18.4	(0.5)

Source: Report Card; Tennessee Department of Education.

The 2012-2013 attendance and promotion rates for the School System’s students in Grades K-8 were equal to or slightly better than that of students statewide. For students at grades 9-12, the dropout rate was almost 70 percent higher than students statewide and the graduation rate almost 10 percentage points lower than students statewide. For African American students, the graduation rate was only two percentage points lower than African American students statewide shown in **Exhibit 2-11**.

**Exhibit 2-11  
Attendance, Promotion, and Graduation Rates  
State and Metropolitan Nashville Public Schools 2012-2013**

	State	Metropolitan Nashville Public Schools
K-8 Attendance Rate*	95.4	95.4
K-8 Promotion Rate**	98.2	98.4
Cohort Dropout Rate***	7.3	12.4
Graduation Rate****	86.3	76.6
Anglo Graduation Rate	89.8	78.9
African American Graduation Rate	77.8	75.8
Hispanic Graduation Rate	81.3	72.3
Asian Graduation Rate	90.3	81.8

Source: Report Card; Tennessee Department of Education.

\*The average number of days students attend school as compared to the average number of days the students are enrolled.

\*\*Those students who are promoted to the next grade each year.

\*\*\*The percentage of students who entered the 9<sup>th</sup> grade that dropped out by the end of the 12<sup>th</sup> grade.

\*\*\*\*Based on the US Department of Education 4-year adjusted cohort formula based on when the student entered ninth grade plus or minus those who transfer, emigrate, or die over a 4-year period including summer terms.

In addition to state accountability measures, the School System has developed a system for evaluating school performance, the Academic Performance Framework (see ACCOMPLISHMENT A-2). Each system school is evaluated on multiple measures including academic performance, academic growth of all students and of specific groups of students, and school climate. Graduation rate is an added measure for high schools. Schools receive one of five ratings: excelling, achieving, satisfactory, review, or target.

Observations regarding conclusions that might be drawn from the three years of Academic Performance Framework data are mixed as demonstrated in **Exhibit 2-12**. Between 2011 and 2013, the number of K-8 schools receiving one of the top two ratings, ‘excelling’ or ‘achieving,’ increased slightly from 16 to 17, both of which represented slightly over 14 percent of all rated schools. The number of ‘review’ and ‘target’ rated schools increased significantly over that same period, from 38 to 57, or from about one-third of all rated schools to 47.1 percent.

For 9-12 schools, the trend differs slightly. The number of top rated schools increased from three to seven, or from 2.6 percent of all rated schools to 5.7 percent; however, ‘review’ and ‘target’ rated schools also increased from 3 of 18 schools (16.6 percent) in 2011 to 5 of 22 schools (22.7 percent) in 2013.

**Exhibit 2-12**  
**Academic Performance Framework 2011-2013**

	2011 Status	2012 Status	2013 Status
<b>Schools Grades K-8</b>			
Excelling	7	23	11
Achieving	9	11	6
Satisfactory	59	58	47
Review	16	11	30
Target	22	15	27
Schools Grades K-8 Totals*	113	118	121
<b>Schools Grades 9-12</b>			
Excelling	2	3	2
Achieving	1	0	5
Satisfactory	12	7	10
Review	2	3	3
Target	1	7	2
Schools Grades 9-12 Totals*	18	20	22
<b>All Schools</b>			
Excelling	9	26	13
Achieving	10	11	11
Satisfactory	71	65	57
Review	18	14	33
Target	23	22	29
<b>Grand Total*</b>	<b>131</b>	<b>138</b>	<b>143</b>

Source: Metropolitan Nashville Public Schools.

\*Does not include schools with less than three years of data.

The School System indicates that a goal of observing the Academic Performance Framework data over time is to see how many schools are moving upward on the various measures within the Framework. Of those schools having sufficient data to receive three years of ratings, 54 (47 K-8 schools and seven 9-12 schools) received the same overall performance rating in 2013 as in 2011; 34 (28 K-8 schools and six 9-12 schools) had a higher or improved rating; and 43 (38 K-8 schools and five 9-12 schools) experienced a decline or lower rating. Whether these trends are significant will depend, in large part, on the final iteration of the data elements being used in the Academic Performance Framework and how they are used at the school level to improve the education for students served by the School System.

Tennessee was one of the first two states to receive funds from the federal government's Race to the Top competition. Of the \$501,000,000 awarded to the state, the School System received a total of \$37,000,000 for the following six initiatives:

- developing exemplary teachers and leaders;
- providing effective professional development for teacher training based on the state's new academic standards and the transition to the new Common Core State Standards;
- employing data coaches to provide training of instructional staff in accessing, analyzing, and using data to inform instruction available through the system's Data Warehouse;

- enhancing the math and science curricula by establishing academies at two high schools that focus on science, technology, engineering, and math;
- providing a variety of services including implementation of whole school reform models for schools classified as underperforming by the state because they failed to meet pre-determined annual benchmarks or benchmarks continuously over time; and
- supporting efforts to improve five student performance areas and four system process areas identified through the 2009 reform initiative, the Metropolitan Nashville Public Schools Achieves.

The 2014-2015 operating budget approved the following initiative:

- contracting with Teach for America for recruitment costs and ongoing professional development for 150 teachers;
- continuing the efforts of teachers to improve student achievement, share lesson plans being developed for use with Common Core, and improve efficiencies in data reporting and analysis as well as the delivery of targeted staff development and instruction at the School System's Virtual School by renewing the annual software licenses for Schoolnet and Blackboard;
- providing training for teachers necessary for the use of student-based technology, its integration into instruction, and the preparation of students for the new online assessments to be used with Common Core;
- accelerating literacy learning by developing targeted intervention programs to help students meet grade level reading benchmarks and improving literacy instruction through the use of a research-based coaching model in partnership with literacy experts; and
- establishing three Pre-K model centers and developing best practices in early childhood education through a partnership with the Peabody Research Institute at Vanderbilt University.

## BEST PRACTICES

Best practices are methods, techniques, or tools that have consistently shown positive results, and can be replicated by other organizations as a standard way of executing work-related activities and processes to create and sustain high performing organizations. When comparing best practices, similarity of entities or organizations is not as critical as it is with benchmarking. In fact, many best practices transcend organizational characteristics.

McConnell Jones Lanier & Murphy, LLP (or the review team) identified 18 best practices against which to evaluate the educational service delivery of the School System. **Exhibit 2-13** provides a summary of these best practices. Best practices that the School System does not meet result in observations, which we discuss in the body of the chapter. However, all observations included in this chapter are not necessarily related to a specific best practice.

**Exhibit 2-13  
Summary of Best Practices – Educational Services Delivery**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
1.	<b>Academic Performance Framework:</b> The school system maintains a comprehensive process for determining the extent to which each system campus is providing a high-quality education for students giving specific attention to the level of student achievement as measured against accepted academic standards.	X		The School System has developed and implemented an accountability system for assessing the performance of each campus based on factors related to academic progress, college readiness, and reduction of achievement gaps between subgroups of students. <b>See Accomplishment 2-A.</b>
2.	<b>Transitioning to Common Core State Standards:</b> The school system utilizes a process for ensuring the written, taught, and tested curricula are closely linked, and what students should know and be able to do at each grade are clearly delineated.	X		Teams of content/grade level teachers have developed scope and sequence English language arts and math that incorporate the state-adopted common core standards. <b>See Accomplishment 2-B.</b>

**Exhibit 2-13**  
**Summary of Best Practices – Educational Services Delivery (Cont’d)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
3.	<b>Pre-K:</b> The school system offers a program of early childhood experiences designed to have a positive effect on children's short-term and long-term cognitive, social, and emotional development.	X		The School System is expanding its Pre-K program in order to provide model early childhood education programs focusing on math skills, early language and multicultural development. <b>See Accomplishment 2-C.</b>
4.	<b>Career Technical Education:</b> The Career Technical Education program offers courses in a wide range of high-skill, high-wage, and high-demand occupations/career paths through highly qualified teachers and business and university partnerships.	X		The School System offers 35 Career Technical Education programs in 18 clusters in its 46 high school academies with the extensive participation of businesses and universities. <b>See Accomplishment 2-D.</b>
5.	<b>All Star Training:</b> The school system's professional development program is designed to support teachers in improving proficiency in using technology to promote inquiry-based learning and information literacy.	X		The School System has developed and is implementing a multi-module professional development course to provide training for staff in the use of the technology needed to better prepare students for college and careers. <b>See Accomplishment 2-E.</b>
6.	<b>Libraries:</b> School libraries are appropriately staffed with certified librarians meeting or exceeding state standards.	X		Each school in the School System has a certified librarian (library information specialist) and a large percentage of libraries also have clerks enabling the librarians to spend most of their time on instructional activities. <b>See Accomplishment 2-F.</b>

**Exhibit 2-13**  
**Summary of Best Practices – Educational Services Delivery (Cont’d)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
7.	<b>Use of Data:</b> The data system is comprised of student, teacher, and school data that are utilized by district and school administrators, program directors, and teachers to make informed decisions and guide instruction to support and improve student performance.	X		The School System has developed a comprehensive student, teacher, and school data warehouse used to track students’ progress from kindergarten to graduation. Staff use the data for decision making and guiding instruction by personalizing learning supports, setting student groupings, and being more effective in the classroom. <b>See Accomplishment 2-G.</b>
8.	<b>Support Services:</b> The program is effective in identifying student needs and providing support and services through a comprehensive set of in-school/district resources and community resources.	X		The School System’s Cluster Support approach brings together specialists from different areas and aligns in-school and community services. It strengthens ties with schools and facilitates ensuring a consistently high standard of service across all schools. <b>See Accomplishment 2-H.</b>
9.	<b>Grants:</b> The grant identification, preparation, management, and monitoring system is effectively organized and staffed, has multiple monitoring and compliance checkpoints, and results in the timely use of grant funds.	X		The Office of Federal Programs and Grant Management has a comprehensive system for the identification and preparation of grants and an efficient system for grant management and monitoring to maximize the utilization of grant funds and minimize loss, due to untimely or lack of use. <b>See Accomplishment 2-I.</b>

**Exhibit 2-13**  
**Summary of Best Practices – Educational Services Delivery (Cont’d)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
10.	<b>Wellness and Fitness:</b> Fitness and wellness activities and programs are incorporated into the school’s daily schedule involving students, staff, and families and result in improved health, better nutrition, and a reduction in obesity.	X		The School System’s Coordinated Health program is integrated into the school day, promoting wellness through proper nutrition, physical education, curriculum, well trained teachers, and opportunities for parent and community involvement. <b>See Accomplishment 2-J.</b>
11.	<b>Academic Performance:</b> The school system implements policies that seek to balance the ratios of high-poverty and low-poverty students in schools.		X	The School System is not utilizing strategies in its magnet schools proved successful in other districts for increasing student achievement by reducing high concentrations of student poverty that exists in schools. <b>See Observation 2-A.</b>
12.	<b>Behavior Management and Discipline:</b> The school system fosters positive school climates that prevent problem behaviors, and use effective interventions to support struggling and at-risk students. The schools’ discipline policies or code of conduct have clear, appropriate, and consistently applied expectations and consequences, helping students improve behavior and increase engagement and achievement. The schools continuously evaluate the discipline policies and practices to ensure fairness and equity.		X	Management of student behavior has resulted in a high number of disciplinary actions and in racial disparities in the use of discipline with a disproportionate number of African American students suspended, expelled, and remanded to alternative learning centers. <b>See Observations 2-B and 2-C.</b>

**Exhibit 2-13**  
**Summary of Best Practices – Educational Services Delivery (Cont’d)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
13.	<b>Gifted:</b> The Gifted and Talented assessment system is effective in identifying gifted students who are members of historically under-represented student populations.		X	Although the K-8 Encore program for the gifted under-identifies minority, economically disadvantaged, English Language Learners, and special education students, it has not incorporated nonverbal and “culture fair” or “culture free” assessments proved to be effective in identifying such students. <b>See Observation 2-D.</b>
14.	<b>Special Education:</b> The pre-referral process minimizes the number of referrals that do not qualify for special education services.		X	The support team process the School System uses to address students’ academic, behavioral, social-emotional or health issues has resulted in a high percentage of referrals that do not qualify for special education services. <b>See Observation 2-E.</b>
15.	<b>Guidance and Counseling.</b> The program adheres to national standards with regard to tasks, and activities counselors perform in the provision of direct and indirect services.		X	The amount of time counselors are assigned to perform non-counseling duties is a barrier to providing high quality interventions for students. <b>See Observation 2-F.</b>
16.	<b>Student Health Services:</b> The Program provides the full range of nursing services to all schools.		X	The School System offers a minimal health services program due to its nurse staffing levels, leaving a large number of schools without appropriate access to services provided by a school nurse. <b>See Observation 2-G.</b>

**Exhibit 2-13**  
**Summary of Best Practices – Educational Services Delivery (Cont’d)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
17.	<b>English Language Learners:</b> The program has the organizational and support structure, qualified staff, resources, challenging curriculum, and effective instructional strategies to prepare English language learners to become proficient in English, and meet grade level academic goals.		X	While the English Language Learners program has changed its structure, curriculum, staffing allocation guidelines, professional development, and monitoring strategies in accordance with the 2010 evaluation recommendations, students’ rates of English proficiency, program completion, and performance on state tests have not improved and it has not met the Tennessee English Language Program Accountability Standards in 2012-2013. <b>See Observation 2-H.</b>
18.	<b>Libraries:</b> School libraries’ collections meet or exceed state standards.		X	Three-quarters of the School System’s high school libraries do not meet Tennessee’s minimum requirement for public school library collection of 12 items per student in average daily membership. <b>See Observation 2-I.</b>

Source: McConnell Jones Lanier & Murphy LLP Review Team.

## ACCOMPLISHMENTS

### ACCOMPLISHMENT 2-A

**The School System has developed a set of accountability metrics for use in assessing school performance.**

In collaboration with the National Association of Charter School Authorizers and through grants provided by a number of organizations, the School System developed the “Academic Performance Framework” “to ensure that each and every school is serving students with a high-quality public education.” Initially designed for use with charter schools, it has been expanded for use with all schools in the School System. It is currently being used to allocate Title I funds to support Reading Recovery, Reading Interventionists, and participation in the Literacy Partnership with Lipscomb University. The APF is also used to pair schools into network and to determine employment of principals.

The Academic Performance Framework uses the following four measures:

- academic performance;
- attainment and college readiness;
- achievement gap; and
- school culture.

Each of the four measures or indicators receives one of five ratings—excelling, achieving, satisfactory, review, and target—and is weighted to provide an overall ‘academic performance’ rating for the school. For example, the first indicator, *academic progress* which reflects academic growth or improvement over time composes 50 percent of the cumulative rating and is measured in two ways. For Grades K-8, the measures are the average one-year Normal Curve Equivalent gain on the Tennessee Value Added Assessment System and the average one-year increase in the achievement level for reading, math, and science on the Tennessee Comprehensive Assessment Program. For Grades 9-12, the one-year scale score gain and the one-year increase in mean achievement level on End-of-Course Algebra I and II, English I, II, and III, and Biology I are used.

For *attainment and college readiness*, the second indicator, the measures for Grade K-8 schools are the percent of students scoring ‘proficient’ or ‘advanced’ for reading, math, and science on the Tennessee Comprehensive Assessment Program and the percent of students in the school’s highest grade projected to score 21 or above on the ACT college entrance exam composite by the end of high school. The measures for Grades 9-12 include the percent of students scoring ‘proficient’ or ‘advanced’ for Algebra I and II, English I, II, and III, and Biology I on the Tennessee Comprehensive Assessment Program; the percent of students scoring 21 or above on the ACT or 980 on the Scholastic Aptitude Test; and the percent of seniors graduating on time with a regular high school diploma.

The third indicator, *achievement gap*, reflects the difference in achievement between subgroups of students that are traditionally disadvantaged and their traditionally non-disadvantaged peers. It is measured at Grades K-8 with an index based on the differences between student subgroups determined by race, economic status, disability, and English proficiency in reading, math, and science proficiencies

on the Tennessee Comprehensive Assessment Program. At Grades 9-12, the achievement gap is measured by an index based on the differences between the same student subgroups on End-of-Course exams in Algebra I and II, English I, II, and III, and Biology I.

*School culture* is defined as the “norms, values, beliefs, traditions, and expectations that direct school activities” as determined through surveys of educators and students with parents to be added in the future. The measures at Grades K-8 and 9-12 are the same including the mean response indicating agreement with positive culture statements on the Teaching, Empowering, Leading, and Learning Tennessee Survey;<sup>1</sup> the mean composite response from a parent survey; and the mean composite response from students on the Tripod Project student perceptions survey.

Pre-established criteria for categorizing performance on individual measures have been established. **Exhibit 2-14** provides the score ranges of the individual measures and the composite number of points corresponding to the five performance categories.

**Exhibit 2-14**  
**Score Ranges and Reporting**  
**Academic Performance Framework**

Individual Measures	Target	Review	Satisfactory	Achieving	Excelling
Achv Level Inc. Percent of Goal	<5%	5 - 29.9%	30 – 59.9%	60 – 74.9%	75% or greater
K-8 TVAAS NCE gain	<-2.0	-2.0 - 0.99	1.0 – 4.99	5.0 – 7.49	7.5 or greater
HS TVAAS SS gain	<-5.0	-5.0 - -1.01	-1.0 – 3.99	4.0 – 7.99	8 or greater
Percent Proficient/Advanced	<20%	20 – 29.9%	30 – 59.9%	60 – 74.9%	75 – 100%
Achievement Gap	>20%	12.1% - 20%	4.1 – 12%	0.1 – 4%	0% or less
TELL TN Survey results	<60%	60 -69.9%	70 -79.9%	80 – 89.9%	90 – 100%
Tripod Survey results	<25%	25 – 39.9%	40 – 54.9%	55 – 64.9%	65 – 100%
K-8 ACT projections	0 - 4.9%	5 – 9.9%	10 – 39.9%	40 – 59.9%	60 – 100%
HS ACT 21+	0 - 9.9%	10 – 19.9%	20 -49.9%	50 – 69.9%	70 – 100%
Graduation rate	<65%	65 – 69.9%	70 – 79.9%	80 – 89.9%	90 – 100%
<b>Composite (Total Points)</b>	<b>0-19.99</b>	<b>20-27.99</b>	<b>28-54.99</b>	<b>55-64.99</b>	<b>65-100</b>

Source: Metropolitan Nashville Public Schools Performance Framework.

**ACCOMPLISHMENT 2-B**

**The School System has developed scope and sequence documents for every Tennessee State Standard in mathematics and English language arts at every grade level in the system and has developed an online system for providing the professional growth necessary for internalizing the standards and their application.**

The Common Core State Standards is a set of academic standards, or learning goals, in math and reading that outlines what students should know and be able to do throughout their K-12 education on a grade-by-grade basis. Having origins in the standards-based reform efforts of the 1996 National Education

<sup>1</sup> The survey was initiated by the Tennessee State Department of Education and a coalition of education stakeholders working collaboratively with the New Teacher Center to assess whether educators across the state report having the resources and support necessary to encourage the most effective teaching.

Summit, the current standards were initiated through efforts led by the National Governors Association Center for Best Practices and the Council of Chief State School Officers. In 2008, those organizations issued a report advocating adoption, nationwide, of a set of common standards designed to prepare students for success in college or in an entry-level career upon graduation from high school. Tennessee's State Board of Education adopted the standards in 2010. Currently, more than 40 states, the District of Columbia, four territories, and the Department of Defense Education Activity have adopted the Common Core and are preparing for its implementation.

In the School System, all scope and sequences have been developed by teams of content or grade level teachers and are available on the district's 'school net.' While there are slight differences in format between the two subjects, within the content area the scope and sequence documents are format-alike. In English language arts, for example, the format used to provide teachers with a roadmap for ensuring that students acquire the skills to become proficient on each standard is the same regardless of the grade level. The instructional framework for the Common Core standards in English language arts include the following activities:

- reading complex texts;
- writing about texts;
- completing a research project; and
- refunding specific activities embedded throughout each unit including:
  - analyzing content;
  - studying and applying grammar;
  - studying and applying vocabulary;
  - reporting findings;
  - citing evidence; and
  - conducting discussions.

Between February and July 2014, 4,700 teachers participated in *All-Star Training*, an eight module professional development course that includes modules on implementing Common Core in the School System and developing unit plans in English language arts and math that will be available online to all system teachers for use during 2014-2015. Seven hundred new teachers were enrolled in the training beginning July 1.

#### **ACCOMPLISHMENT 2-C**

**The School System is expanding the capacity of its Pre-K program in 2014-2015 from 2,516 to 2,838 students by repurposing two PreK-4 campuses to Model Pre-K Learning Centers and adding capacity through a partnership with an existing community center that will focus on early math skills, language development, multicultural development, and intense staff development programming.**

In 2013-2014, the School System operated two types of Pre-K programs, general education classes and blended classes, both of which can be funded locally, by state funds, or by Title I funds. Locally funded programs are located in 18 elementary schools, state funded programs in 37 schools, and Title I programs in three schools. Three schools operated both locally and state funded programs, and one

school has both state and Title I funded programs. The School System also operates Pre-K classes in five community centers. General classes are designated for children without disabilities and blended classes for children with special education Individualized Education Plans as well as those without. Blended classes are fee-based for students without an Individualized Education Plan.

Beginning in 2014-2015, Ross and Bordeaux Elementary Schools will be converted from PreK-4 schools to Model Pre-K Centers. Programs at those schools and the Casa Azafran Community Center will be staffed with teachers and assistant teachers in every classroom with knowledge of early childhood development. The directors of the three programs have been selected and, with their teachers, will work with the Peabody Research Institute at Vanderbilt University to develop the model program.

Research is clear concerning the value of high quality early learning experiences for young children. The Pew Center on the States, in its 2011 report *Transforming Public Education: Pathway to a Pre-K-12 Future*, states that “we know from more than 50 years of research that vital learning happens before five” and that starting school in kindergarten or first grade deprives children of the opportunity to profit from early learning, and that relying on children playing catch-up does not provide a long-term strategy for success. Rather, the vast body of evidence from research indicates that high-quality Pre-K is an essential catalyst for raising school performance. Eric Dearing, in a 2009 issue of *Child Development* 80 (as reported in the 2011 Pew report), reported that participation in high-quality early education programs not only improves early literacy and math skills but is also associated with later academic performance in the primary years and beyond. The College Board is so convinced that children having the opportunity for the early development of strong literacy and language skills are more likely to graduate from high school on time that it lists Pre-K for all three and four year olds as the first of ten recommendations for increasing college enrollment.

The Manpower Demonstration Research Corporation – MDRC has taken a similar position in supporting the long-term benefits of Pre-K. In *Delivering on the Promise of Preschool (2013)*, “If left unaddressed, gaps in school achievement in preschool and kindergarten (between low income children and their more affluent peers) don’t close and may widen over the ensuing elementary years.” Research reported by the Society for Research in Child Development indicates that “a recent analysis integrating evaluations of 84 preschool programs concluded that, on average, children gain about a third of a year of additional learning across language, reading, and math skills” and that systems in Tulsa and Boston “produced larger gains of between a half and a full year of additional learning in reading and math.”

There are cautions, however, in the development of Pre-K programs. The Manpower Demonstration Research Corporation – MDRC reports that as many as 20 percent of preschool-enrolled children have high levels of behavioral problems requiring the appropriate training and guidance in managing these issues. The Pew Center’s research suggests that focusing solely on reading and math skills will not produce the desired results but must give attention to all the important skills: cognitive, social, and emotional. The School System is to be commended for developing a program designed to meet all the needs of its Pre-K students.

## **ACCOMPLISHMENT 2-D**

**The School System has an exemplary Career Technical Education program offering 35 programs in 18 clusters through 46 high school academies, with wide business buy-in and participation, partnerships with universities, and vocational student associations.**

The Career Technical Education program serves students in grades 10 to 12. In 2013-2014, 11,788 students, 55.9 percent of the students in grades 10-12, are participating in the program. In grade 9, students take a Freshman Seminar that includes career interest surveys and exposure to different careers and the associated courses that are available. Ninth grade students attend a career fair in October where they interview exhibitors, perform hands-on activities, and visit the varied career academies. At the end of the 9<sup>th</sup> grade, they choose an academy. The academies were established based on students' interests, the Nashville job market, and school building resources with the goal of preparing students for high-skill, high-wage, and high-demand jobs. Each high school, exclusive of the Virtual School, has two to five academies shown in **Exhibit 2-15**. The 46 academies are organized into the following five broad areas:

- Arts, Media and Communications offered in eight high schools;
- Business, Marketing, and Information Technology offered in 10 high schools;
- Engineering, Manufacturing and Industrial Technology offered in nine high schools;
- Health and Public Service offered in 15 high schools; and
- Hospitality and Tourism offered in four high schools.

**Exhibit 2-15  
High School Academies**

High School	Arts, Media & Communications	Business, Marketing & Information Technology	Engineering, Manufacturing & Industrial Technology	Health & Public Service	Hospitality & Tourism
Antioch		The Tennessee Credit Union Academy of Business & Finance	Academy of Automotive Technology	Academy of Teaching & Services	Academy of Hospitality
Cane Ridge	Academy of Arts & Communication		Academy of Architecture & Construction	Academy of Health Management Academy of Law	
Glenciff		The Ford Academy of Business & Innovation	Academy of Environmental & Urban Planning	Academy of Medical Science & Research	
Hillsboro	Academy of International Business & Communications	Academy of International Business & Communication		Academy of Global Health & Science Academy of International Baccalaureate	
Hillwood	Academy of Art, Design, & Communication			Academy of Health Sciences	Academy of Business & Hospitality
Hunters Lane	Academy of Design & Technology	Academy of Design & Technology Academy of Marketing & Business		Academy of Health & Human Services Academy of International Baccalaureate	Academy of Hospitality
Maplewood		Academy of Business & Consumer Services	Academy of Energy & Power Academy of Business & consumer Services	Academy of Sports Medicine & Wellness	
McGavock	CMT Academy of Design & Communications	US Community Union Academy of Business Credit & Finance	Academy of Aviation & Transportation	Academy of Health Science & Law	Gaylord Entertainment Academy of Hospitality
Overton	Academy of Musical Performance	Academy of Information Technology		Academy of Health Sciences	
Pearl-Cohn Entertainment Magnet	Academy of Entertainment Communication Academy of Entertainment Management				

**Exhibit 2-15  
High School Academies (Cont'd)**

High School	Arts, Media & Communications	Business, Marketing & Information Technology	Engineering, Manufacturing & Industrial Technology	Health & Public Service	Hospitality & Tourism
Stratford STEM Magnet		Academy of National Safety and Security Technologies	Academy of Science & Engineering	Academy of National Safety & Security Technologies	
The Virtual School		Academy of Business & Marketing			
Whites Creek			Academy of Alternative Energy, Sustainability, & Logistics	Academy of Community Health Academy of Education & Law	

Source: *The Academies of Nashville, July 1, 2013.*

The Career Technical Education program has 116 certified teachers. According to the program coordinators, half of the teachers have an industry background and receive a Tennessee apprentice/occupational license for three years, during which time they complete all education and teaching requirements. New teachers are assigned a coach and a lead teacher as a mentor. The program also created a New Career Technical Education Teacher Academy in the fall of 2012 to help new teachers, especially those coming from industry, gain the knowledge and skills necessary to begin their teaching career. The program is an 18-month process where instructional coaches meet with the new teachers on a “just in time” plan—teaching them instructional strategies, instructional planning, classroom management and classroom assessment while they are with their students. Each teacher has an individualized professional development plan in order to keep current with their industry.

The career academies have extensive business participation and support. The highest level of business participation involves senior executives who recommend people from their companies, or their colleagues, to serve on one of five Partnership Councils to advise on structure, curriculum, and experiences for all the Academies. Since their establishment in 2005, the number of business partnerships has increased 55 percent with partner retention at 90 percent. Each academy has an advisory board/partnership council that ensures the academy’s curricula meets industry standards, provides work-based learning opportunities for faculty and students, and identifies additional academy needs. According to the 2012-2013 Academies of Nashville Annual Report, that year the academies had 249 active business partners contributing 31,435 volunteer hours, equaling a one-year investment in excess of \$2,200,000. The business partners visit the schools, speak to students, invite students to visit their businesses, and participate in the annual program evaluations.

The Career Technical Education program also partners with local universities, including Nashville State Community College, Volunteer State Community College, Tennessee Technological University, Tennessee College of Applied Technology, and Middle Tennessee State University. Students can take dual credit courses in areas such as agriculture, arts and communication, automotive technology, aviation, business, construction, cosmetology, criminal justice, culinary arts, engineering, family consumer sciences, health science, marketing, and information technology.

Students participate in a variety of Career Technology Education student associations such as the National Scholastic Press Association, Student Television Network, Distributive Education Clubs of America, Future Business Leaders of America, Family, Career and Community Leaders of America, Skills USA, Future Teachers of America, Health Occupations Students of America, Technology Student Association, and Mock Trial.

An additional positive by-product of initiating the career academies concept is the improvement in the graduation rate in the School System. Between 2007-08 and 2011-2012, the graduation rate improved by 3.2 to 27.2 percent in individual high schools and by 20.9 percent overall compared to an increase statewide of 6.2 percent.

### **ACCOMPLISHMENT 2-E**

**The School System is training its full-time certified staff in the use of student-focused technology necessitated by the creation of new online learning environments to better prepare students for college and careers.**

The School System has developed *All-Star Training*, an eight-module professional development course, to train its full-time certified teachers, principals, and assistant principals, on using the new technology, integrating it into instruction, and preparing students for the new online assessments developed through the Partnership for Assessment of Readiness for College and Careers for the Common Core standards. The Tennessee state legislature voted in April 2014 to delay statewide implementation of the new assessments for one year. The current state assessment instrument, the Tennessee Comprehensive Assessment Program, will continue to be used during 2014-2015.

All-Star Training is designed to provide information through a variety of approaches about the School System's Education 2018, the system's strategic plan, and the resources and technology available for meeting the plan's goals as well as other major initiatives and a more fully shared understanding, systemwide, of the Common Core standards and the new assessments. The eight modules are available to all staff through Blackboard, a technology application that allows staff to integrate resources from multiple content formats such as PowerPoint, video, audio, or animation into courses or units as a means of enhancing learning by allowing students to review information based on their preferred learning styles and schedules. With the exception of counselors who will complete a modified version, and Pre-K teachers, all full-time certified staff returning in 2014-2015 are expected to complete the modules no later than July 31, 2015. The eight modules included in the training are as follows:

- Metropolitan Nashville Public Schools Education 2018;
- Technology Essentials;
- Metropolitan Nashville Public Schools Learning Platform;
- Implementing Common Core within the School System;
- Blended Learning Environments;
- Online Assessment Readiness;
- Response to Instruction and Interventions; and
- Unit Planning.

The School System's staff can complete the modules and associated assessments through either the online or blended models, or through guided support at Martin Professional Development Center. In the online model, all modules and assessments are self-paced and are completed online. The blended model combines module completion online with support sessions facilitated by school-based trainers. The support sessions can meet during planning periods, faculty meetings, time scheduled outside school hours, or any other option coordinated through the building principal.

Training at Martin Professional Development Center is being offered in a variety of formats that includes face-to-face and online approaches. On Monday-Thursday from March 3 through July 31, guided instruction is being provided in all day sessions, twice a week, on each of two groupings of modules, 1-4 and 5-7. On Fridays, guided support is provided in all day sessions for Module 8. 'Drop-in' sessions covering Modules 1-7 are also available on the first and third Saturdays of every month. Documentation for completion of all modules regardless of the training option must be completed in Blackboard.

### **ACCOMPLISHMENT 2-F**

**The School System's library program is well staffed with full-time certified librarians supported by clerks, allowing the librarians to engage in instruction-related activities that enhance students' academic achievement.**

Research studies clearly and consistently demonstrate the positive and statistically significant relationship between having adequate library staffing and improved student achievement. The role of librarians is especially critical to student performance. Schools with well-staffed libraries where endorsed librarians also have clerks show consistently higher performance levels. The presence of library clerks and the number of hours they work are critical to librarians' ability to perform the range of high priority activities. Library clerks "free" the librarian from having to perform basic library activities and allow the librarian to allocate time to activities that are more directly related to teaching and training staff and students, such as collaboratively planning and teaching with teachers, providing staff development to teachers, facilitating information skills instruction, managing technology, communicating with school administrators, and providing reading incentive activities. These activities lead to incremental gains in student learning and performance.

The School System's library services organization consists of a lead librarian with three support staff, 130 full-time endorsed library information specialists, and 81.5 full-time equivalent library clerks. The support staff members work with the libraries: One is responsible for professional development and two are technology specialists.

The Tennessee Board of Education minimum requirements for public school library personnel are listed in **Exhibit 2-16**. Each of the School System's libraries has one or more full-time librarians with the appropriate endorsement. At the elementary and middle school levels the School System exceeds the standard for schools with 549 or fewer students. It meets the standard for schools with 550 or more students. At the high school level it meets the standards for all schools.

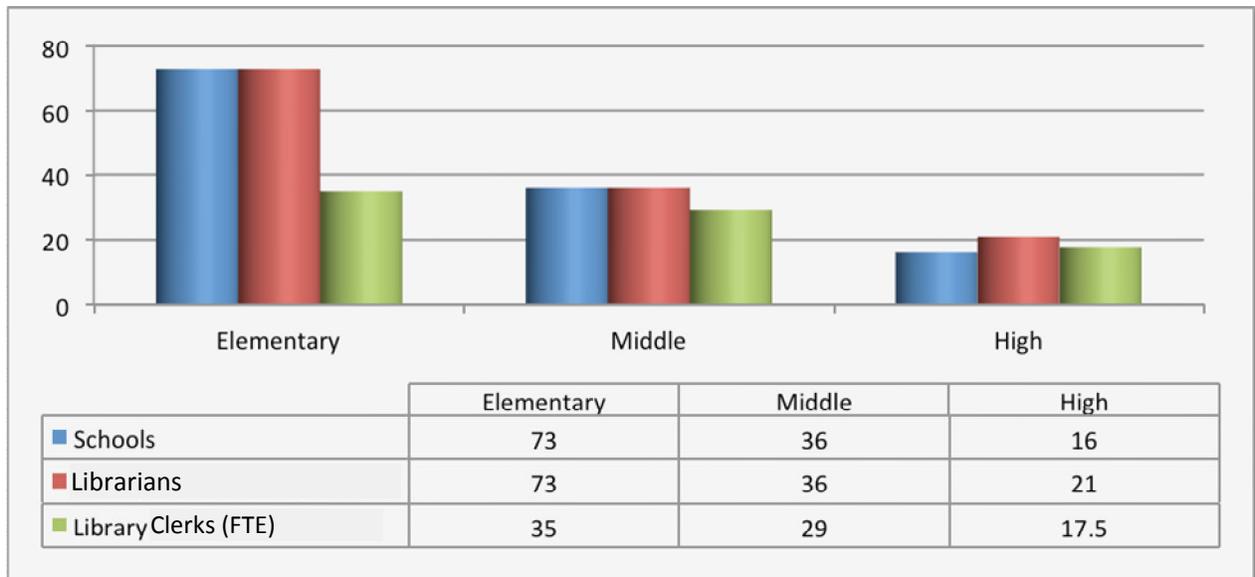
**Exhibit 2-16  
Tennessee Public School Library Staffing Standards and  
Metropolitan Nashville Public Schools Library Staffing**

Staff – Average Daily Membership	Staffing Standard	Number of Libraries	Number of Librarians	Meet/Exceed Standard
<b>Elementary</b>				
399 or Fewer Students	Library Information Coordinator	31	31	Exceed
400 to 549 Students	0.5 Librarian	21	21	Exceed
550 or More Students	Full-Time Librarian	21	21	Meet
<b>Middle School</b>				
399 or Fewer Students	Library Information Coordinator	8	8	Exceed
400 to 549 Students	0.5 Librarian	10	10	Exceed
550 or More Students	1.0 Full-Time Librarian	18	18	Meet
<b>High School</b>				
299 or Fewer Students	0.5 Librarian	-	-	-
300 to 1,499 Students	1 Full-Time Librarian	11	11	Meet
1,500 or More Students	2 Full-Time Librarians	5	10	Meet

*Source: Metropolitan Nashville Public Schools, Learning Technology and Library Services, February 2014.*

In addition to full-time librarians, the School System has 81.5 full-time equivalent library clerks as shown in **Exhibit 2-17**. In libraries that do not have clerks, librarians recruit and train volunteers and students to help them with clerical tasks and train students in self-checkout.

**Exhibit 2-17  
Number of Library Information Specialists and Aides**



Source: Metropolitan Nashville Public Schools, *Learning Technology and Library Services*, February 2014.

The School System’s librarians follow the “librarian as teacher” model. Librarians with a full-time aide estimate they spend 85 to 90 percent of their time on instructional activities. Librarians who have no aide or who have a part-time aide estimate that between 50 and 70 percent of their time is spent on instructional activities. Library information specialists engage in the following instructional activities:

- direct instruction in the classroom or via video shown in multiple classrooms on research skills;
- working with individual or small groups of students on research projects during independent study;
- helping students create multi-media projects using technology, such as movies, Podcasts, and electronic presentations;
- co-planning lessons and projects with teachers;
- teaching grade-specific library skills to elementary school students; and
- working at the elementary level with low-literacy students, teaching them library, literacy, and research skills.

The librarians publicize their role and how they can assist teachers and students in a newsletter. The lead librarian also works with principals, informing them of the role of librarians and how they can contribute to student academic achievement.

**ACCOMPLISHMENT 2-G**

**The School System has built a comprehensive data warehouse and implemented an effective system for using data to analyze student performance and guide instruction.**

The School System initiated the Longitudinal Education Analysis and Decision Support data warehouse in 2009 and launched it in January 2010 in response to schools not meeting the benchmarks set by the federal No Child Left Behind Act. The Longitudinal Education Analysis and Decision Support data warehouse provides statistical information on the “whole child”—tracking student progress from kindergarten to high school completion and beyond, including data on course grades, Tennessee Comprehensive Assessment Program scores, attendance, truancy, school activities, after-school activities, health status, and school changes. It gives teachers and principals a better understanding of each student's progress, academic achievement, discipline, and attendance. The system allows teachers and administrators to log onto the database on their computers, and access a “dashboard.” Teachers have access to the student data in real time and can identify any warning signs, using the early warning indicator system. Teachers can correlate various factors with student achievement, identify trends over time for an individual student, assess if the student is on track to succeed, and identify strengths and opportunities for improvement. Using these data, teachers can personalize learning supports, set student groupings, and be more effective in the classroom. The School System plans to add data on post-secondary education and employment, central office operations, district financing, and teachers' licensure and certification.

The School System has 12 data coaches who train instructional coaches, teachers and principals across all campuses on the Academic Performance Framework; how to access the data in the data warehouse; and how to disaggregate, understand, and use the data. The data coaches are funded through the Race to the Top grant. Each school has a data room where teachers identify and track students in need of assistance and coordinate instructional activities with other teachers and with instructional coaches.

In addition to teachers and school administrators, the Longitudinal Education Analysis and Decision Support data warehouse is also useful for the school board, administration, student support services, students and parents, and community partners. The data can be used for accountability, performance management, monitoring year-to-year improvement, resource allocation, professional development planning, operational planning and operations, teacher effectiveness monitoring and support, and intervention services as presented on **Exhibit 2-18**.

**Exhibit 2-18**  
**Data Warehouse Data Use and Reports**

<b>Users</b>	<b>Purpose of Data</b>	<b>Reports</b>
School Board	Accountability Performance Management Monitoring Year to Year Improvement Resource Allocation	School Board Dashboard
Administration	Performance Measurement/Management Resource Allocation Strategic Planning Professional Development Planning Operational Planning and Operations	District Dashboard by Cluster  Cluster Dashboard
Student Support Services	Intervention Services Social work and psychology Students with Disabilities English Language Learners Homeless At risk Identification Coaching Services for Teachers	Students with Disabilities Assessment Composite
School Leadership	Beginning of the Year Planning School Improvement Planning School Level Performance Trends Root Cause issue Identification Teacher Effectiveness Monitoring and Support Resource Allocation Culture and Climate Feedback	School Dashboard  School Grades/Achievement Comparison
School Staff	Student and Teacher Need Identification and Trend Analysis Performance measurement Individual Student and Teacher Personalized Support	Program profile  Marking Period Failure Summary
Classroom Teachers	Classroom Performance Trends Assessment Analysis Personalized Learning Supports Student Grouping Culture and Climate Feedback	Test Results Summary for a Specific Teacher  Individual Student Profile and Test Results Summary
Students and Parents	Trends Over Time for an Individual Student Holistic Look at Individual Student Status of Student to be on Track to Succeed Identification of Strengths and Opportunities for Improvement	Student Record and Student Profile Dashboard
Community Partners	Resource Allocation and Program Placement Program Impact Assessment Targeted Instruction Intervention/Enrichment	By School, Students' Profile, Performance over Three Years

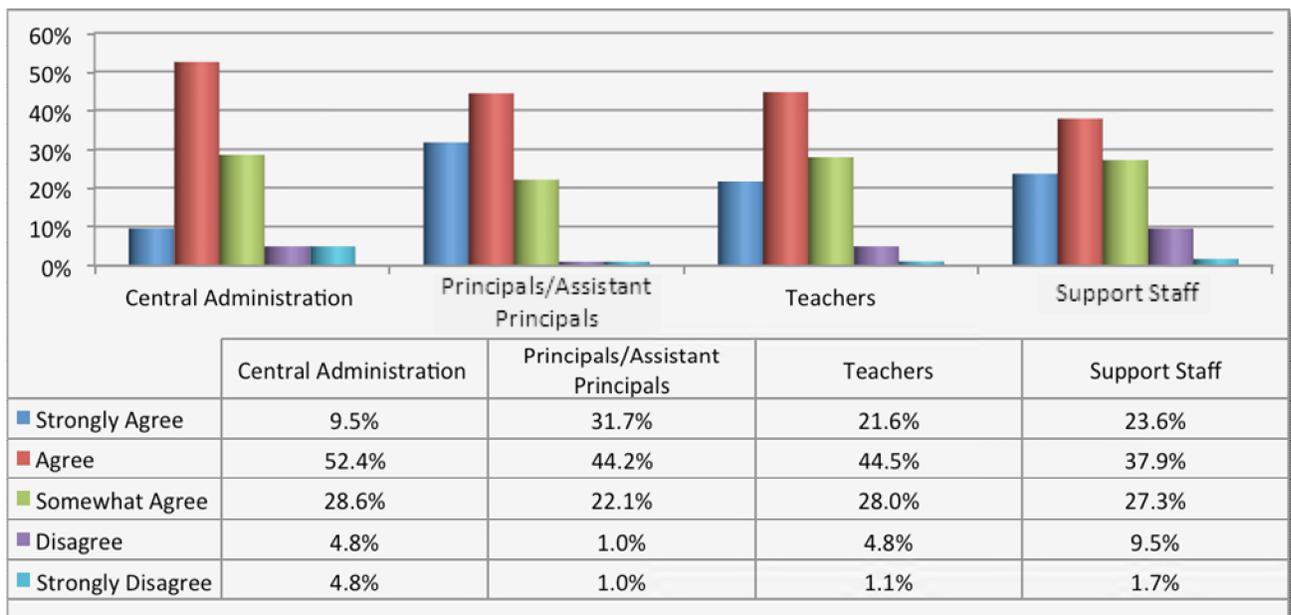
*Source: Metropolitan Nashville Public Schools, Information Management and Decision Support, Leveraging Data for Action, Improvement, and Accountability, April 5, 2014.*

Members of the review team conducted nine focus groups with teachers in three elementary, three middle, and two high schools, including two charter schools. Each of the schools has a data room displaying performance data by teacher/classroom and individual student. At all levels teachers meet with data coaches and instructional or reading specialists to review student performance data and identify where students are struggling or are deficient. Teachers use these data for ability or skill-level

groupings in the elementary and middle school levels, and identify areas that they need to teach or re-teach. Elementary school teachers also discuss with lower grade teachers gaps in students' knowledge. At the high school level teachers review individual students' attendance and discipline data and communicate across departments to coordinate instructional services. At all school levels, teachers and coaches communicate performance data to students. For example, teachers and the data coach have data chats with students in 3rd and 4th grades, show them their scores, indicate where they need to improve, and ask students for suggestions on how they can improve. At the middle school level, students have a folder with their own data, have ownership over their performance, and can monitor it. Similarly, at the high school level, teachers make students aware of their academic status based on the data disaggregation and make them take responsibility for it.

The survey the review team conducted of central administration staff, principals and assistant principals, teachers, and support staff confirmed the use of data by teachers to make informed decisions as shown in **Exhibit 2-19**. A majority of each group agreed or strongly agreed that teachers routinely use data to make informed decisions.

**Exhibit 2-19**  
**Survey of Metropolitan Nashville Public Schools – In General Teachers at my Level**  
**Use Data to Make Informed Decisions**



Source: Survey of Metropolitan Nashville Public Schools, April-May 2014.

\*Percentages were recalculated excluding respondents who checked "not applicable."

## ACCOMPLISHMENT 2-H

**Using a Cluster Support model, the School System identifies unmet needs of students and their families and provides wrap-around services through community partnerships to improve attendance, prevent drop out, and increase graduation.**

In addition to implementing an array of support programs such as Before and After School, Safe and Drug Free Schools, Homeless Education for Families in Transition, and First Offenders program, the School System developed a Cluster Support approach that brings together teams of specialists from different areas and aligns in-school and community services to provide a comprehensive set of services, prevent duplication of services, and reach more students. This approach strengthens ties with schools and facilitates a consistent high standard of service, where previously commitment to support services and quality of implementation varied across schools. The Cluster Support core team is composed of three to four social workers, a family involvement specialist, a Family and Youth Service assistant who is a truancy officer, and a Cluster Support clerk. Each Cluster Support team is located in one of the schools in the respective cluster, and serves a feeder pattern of schools. Additional staff may join the core team depending on student needs. The staff may include school counselors, Family Engagement specialists, translators and other staff from the Office of English Language Learners, behavior specialists, and the coordinator of Safe and Drug Free Schools and Communities. School staff contact the Cluster Support team if they determine that a student, or his/her family, needs access to resources not available in the school. The Cluster Support team meets weekly to review school trend data, discuss students at risk or in need of services, and identify appropriate services for those students. The team reviews the request and assigns it to a social worker or a Family and Youth Service assistant for further assessment. Schools also hold monthly Support and Intervention meetings which include the principal; the school's leadership team; and, as appropriate, other school staff such as a counselor, school nurse, school psychologist, academic coaches, and members of the Cluster Support team. The Support and Intervention meetings, led by the principal, discuss specific interventions, services and programs for respective students who are at risk based on their attendance, grades, or disciplinary problems.

To access and use community resources, the Office of Support Services established, in 2013-2014, the Community Achieves program. The program functions in 19 schools and focuses strategically on the combined efforts of the school and its community partners as they impact college and career readiness, health and wellness, social services and parental engagement. Having a set of expected outcomes associated with specific programs and initiatives, the Community Achieves program conducts an inventory of resources in each school, showing what is currently in place, where the gaps are, and which community partners can address these gaps. Based on its inventory of resources in each school, it identifies appropriate strategies and resources for the school and develops a work plan that the school will implement to achieve outcomes such as parent involvement.

The School System involves and supports parents through a myriad of programs and activities such as the following:

- a Parent University that offers one- or two-hour sessions for parents;
- family suppers where participants are asked for input on academic, behavior, and support issues and mobilize the community to take care of their own issues;
- an Educate the Community radio program targeted at Latino families;
- a monthly newsletter in English, Spanish, Kurdish, and Arabic that is distributed to 179 religious organizations;

- an Urban Family Engagement Network that provides a 12-session training program for parents, implemented by cluster, about their school, the school board, and the political process and encourages them to become involved;
- a Family Academic Success Team pilot grant that teaches parents how to help support their children academically; and
- a poverty simulation for teachers.

Metropolitan Schools has also implemented a system of support for middle and high school students that have been identified through the Dashboard At-risk Screening, as at-risk of dropping out. The Cluster Support team invites students identified as having academic, attendance, or discipline problems to attend the screenings which are held every two months. The screening has several stations staffed by members of the Cluster Support team. The students meet with different staff based on their needs. If they have an academic problem, they may meet with the counselor who reviews their credits, grades, and creates an academic improvement plan for them. They may also meet with a social worker who will address barriers to academic success, and the Family Involvement specialist who will connect them to after school services. The Cluster Support team will meet after the screenings to review the information gathered from the student interviews and make recommendations about services. The team will enter the information into the Data Warehouse Support and Intervention section of the student profile which will be shared with the principal for academic follow-up, and with community partners who will identify which intervention activities are showing the best impact.

#### **ACCOMPLISHMENT 2-I**

**The School System has developed an effective system to assist with and monitor grants compliance for the more than \$151,000,000 in state, federal, and foundation grants during 2013-2014. The School System uses a team of school improvement program facilitators that helps schools develop school improvement plans, ensure compliance with federal and state policies, assist schools with budgeting of grant funds, and evaluate allocation of resources.**

The Office of Federal Programs and Grant Management has a comprehensive system for the identification of grant opportunities, assessing the ability to meet the grant requirements, evaluating the alignment of the grant with the strategic plan, and preparing grant applications. Once a grant opportunity is approved, the office assembles a grant development team that prepares the application. The office conducts professional development on grant writing and grant development and management. It offers a quarterly grant colloquium; publishes a monthly Grant Grapevine Newsletter that highlights grant opportunities and sends it to all schools; offers grant preparation workshops to administrators, staff and teachers; and encourages schools to apply for grants by having school-based grant development teams.

The office also has an efficient system for grant management and for monitoring the use of funds. Their goal is to maximize the utilization of grant funds and minimize loss due to untimely or lack of use. When the School System secures a grant, it assigns it to a business unit for monitoring by a fiscal team composed of a contracts specialist, grant manager, and fiscal manager. The process for monitoring the use of grant funds involves several approval layers and checks. The fiscal team reviews all fund requisitions before they are processed. The Office works with school improvement program facilitators

and school bookkeepers. Three of the eight school improvement specialists are assigned to elementary schools, two are assigned to middle schools, two are assigned to high schools, and one is assigned to iZone and charter schools, each overseeing 22 schools on average. The school improvement facilitators assist schools in the development of their school improvement plans, work with the school improvement teams, monitor implementation of the school improvement plan, ensure compliance with federal and state policies, assist with budgeting, analyze and maintain school level data, and evaluate resource allocation. The Office of Federal Programs and Grant Management trains and works with the school bookkeepers to build the schools' budget capacity, ensure compliance with state and federal regulations associated with the grant, and monitor fund use.

The Office also partners with other departments. It collaborates with the Office of Leadership and Learning to ensure that the grants the School System seek are aligned with the strategic plan and vision. It works with Business Services to ensure compliance with federal policies and procedures. The Research Assessment and Evaluation Office assists with the development of performance measures for the grants and with their evaluation.

The Office of Federal Programs and Grant Management provides training and technical assistance to all staff working with federal and state funds. The technical assistance consists of researching laws and regulations and preparing budgets, budget amendments, and fiscal reports.

#### **ACCOMPLISHMENT 2-J**

**The School System has implemented a comprehensive health and wellness program – the Coordinated School Health program – and institutionalized it at the school and district level by collaborating and coordinating with all departments in the School System, aligning program goals with systemwide student success initiatives, and partnering with community organizations, universities, and hospitals.**

With the goal of creating a healthy school environment and promoting students' knowledge and skills to make informed decisions regarding their health and well-being, the School System's Coordinated School Health program promotes student wellness through proper nutrition, physical education practices, curriculum, well trained teachers, and opportunities for parent and community involvement. The School System implemented the Coordinated School Health program consisting of health education; health services; physical education; nutrition services; counseling, psychological and social services; a healthy and safe school environment; and health promotion to staff and family community involvement. It is also focusing on Dr. Basch's seven educationally-relevant health disparities that include breakfast, physical activity, asthma, vision, teen pregnancy, aggression and violence, and Attention Deficit Hyperactivity Disorder. As part of this initiative, both staff and students have participated in a wide range of physical and wellness activities:

- In 2012-2013, 1,070 faculty and staff members participated in wellness programs and spent 143.4 hours of staff development time addressing health-related topics.
- Since 2010-2011, 318 faculty members were certified in Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillators (AED).

- Between 2009-2010 and January 2014, the School System increased the number of participating campuses, the number of students served, and the rate of student participation in physical fitness activities and health screenings as presented in **Exhibit 2-20**. The prevalence of overweightness and obesity rate in students has been reduced from 39.9 percent in 2007-08 when the Coordinated School Health program started to 36.1 percent in 2012-2013.

**Exhibit 2-20**  
**Metropolitan Nashville Public Schools Students Receiving Services**  
**from the Coordinated School Health Program**  
**2009-2010 to 2013-2014**

School Year	Number of Students Served	Number of Campuses	Number of Students Participating			
			Mile Run / PACER	Height/ Weight/ Body Mass (BMI) Index	Blood Pressure	Vision and Hearing
2009-2010	40,206	72	9,419	14,900	6,420	17,202
2010-2011	60,893	105	10,444	21,499	5,880	27,084
2011-2012	75,876	All**	15,950	28,842	6,723	28,901
2012-2013	76,563	All**	16,963	29,968	5,759	29,082
2013-2014*	77,940	All**	8,218	16,983	2,292	18,736

Source: Metropolitan Nashville Public Schools Office of Coordinated School Health, February 2014.

\*2013-2014 data is up to January 31, 2014.

\*\* Excluding charter schools and some specialty schools.

The Coordinated School Health program has established partnerships with several universities and hospitals including Lipscomb University, Belmont University, Tennessee State University, Aquinas College, Nashville State Community College, the Vanderbilt Medical Center, and Children’s Hospital at Vanderbilt. It is also working with local agencies such as the Nashville Fire Department and the Metropolitan Nashville Public Health Department and such health foundations as the American Heart Association and Cumberland Pediatric Foundation. Partnerships have also been established with the YMCA of Middle Tennessee, United Way of Metropolitan Nashville, Community Food Advocates, Southeast United Dairy Industry Association, the Governor’s Council, Alignment Nashville, and the Tennessee Titans.

The program is integrated into the school day to educate students, teachers, and parents about the importance of fitness and nutrition, and uses the large volume of health and wellness data it collects to help schools set specific goals and make informed decisions regarding the health, fitness, and nutrition areas on which to focus. **Exhibit 2-21** shows examples of programs and activities schools have implemented to promote and accomplish student wellness goals.

**Exhibit 2-21  
Examples of School Activities and Programs to  
Promote Student and Family Health and Wellness**

Activity/Program	Activity/Program Description
Walking	Mayor's 100 Mile Walk Challenge Walk to School Day Blue Cross Blue Shield Walking Works for Schools Walk Away the Pounds Morning Homeroom Walk – 10-minute walks in the morning
Running	School-wide running club Fun runs in physical education class Mileage Club Girls on the Run
Exercise	Fitness testing Field Day Weekly afterschool fitness program Dance and Music Program: "Disco Night" Project ACES (All Children Exercising Simultaneously) for Pre-K to 4 kids Kids workout program broadcasted in the morning Go Fit Fitness Club Jump Rope for Heart/Hoops for Heart/Healthy Heart Club
Nutrition	Nutrition Tips in weekly newsletters Nutrition bulletin boards Students keep a weekly running tally of their consumption of water, fruit and vegetables, and exercise The Grow More Healthy monthly food tasting events Healthy Head Start: a program on nutrition and healthy food/life choices for 2 <sup>nd</sup> graders– in collaboration with Vanderbilt University Nutrition Lecture series to students in grades 3 and 4 Nutritional Bingo
Information	Nutrient of the month Nutrition and How to deal with picky eaters Cafeteria Word Wall with healthy foods Alternative party food ideas given to teachers for use in classroom parties School Health Fair Health and Wellness committee newsletter Health campaigns Self-health evaluation survey of physical education students to assess their personal strength
Family Involvement	Discount coupons to a skating and bowling center to encourage family participation Family night activities Community Health Fair Parent Nutrition Night Fruit and Vegetable Festival The Cat in the Hat Family Health Night Fitness Days for Students and Families at schools one Saturday a month

**Exhibit 2-21**  
**Examples of School Activities and Programs to**  
**Promote Student and Family Health and Wellness (Cont'd)**

Activity/Program	Activity/Program Description
Garden	School vegetable garden Butterfly garden Garden Club
Policies	No candy in the school policy
	Teachers are encouraged to use movement in the classroom
	Added health education to curriculum

Source: Metropolitan Nashville Public Schools, Coordinated School Health Program, April 21, 2014.

## DETAILED OBSERVATIONS

### STUDENT LEARNING OPPORTUNITIES

#### OBSERVATION 2-A

**The School System has begun a number of research-based initiatives designed to improve learning opportunities for students but has not yet realized the desired levels of success.**

In 2009, the School System began implementation of *Metropolitan Nashville Public Schools Achieves* a transformational leadership change model aimed at the systematic improvement of student achievement across all sub-groups of students in the system. Leaders from the community and the School System were enlisted to assist in giving direction to the project. In April 2010, the Annenberg Institute for School Reform at Brown University began a two-and-one-half year evaluation of the effort with particular emphasis on documentation of the reform efforts made throughout the project.

The first year of *Metropolitan Nashville Public Schools Achieves* was dedicated, in large part, to planning. Nine Transformation Leadership Groups and a steering committee to advise the Director of Schools and the Change Leadership Group were established. Most of the groups' attention was dedicated to identifying and studying best practices and how best to implement them. Annenberg reported positive changes in terms of collaborative practices and relationships, developed with community organizations and businesses, through Transformational Leadership Group membership and the high school academies. A five-member Achieves National Advisory Panel composed of experts on educational reform was proposed for year two with meetings twice a year to examine and discuss the reform efforts with community leaders and district officials.

During the second year, there was a sense at the central office that the vision and mission were becoming focused on student improvement, highly effective teaching, leadership development, and continuous improvement. Both campus-based and central office administrators felt that distributive leadership was being practiced to a greater extent than previously, and that the willingness by central office to share decision-making had improved. There was a significant improvement in the emphasis on, and support for, data-informed decision making. The data warehouse was more widely accepted and used although some resistance to the use of data was evident. While some improvements had been made across the School System and at the central office, communications remain a challenge. The

capacity of principals to provide effective leadership improved based on more structured professional development offerings. Accomplishments were noted for all Transformational Leadership Groups as each moved from planning to implementation including:

- creating tier-level professional learning communities, restructuring the English learner coaching system to reach more schools, providing professional development for coaches, expanding services to more schools, planning for an English as a Second Language endorsement and professional development program, and implementing a program which offers literacy and life skills training to non-English-speaking parents (Performance of English Language Learners);
- continuing the focus on a culture of inclusion in all learning environments, developing the capacity of both general and special educators to support student learning, aligning and implementing collaborative professional development support practices, and implementing accelerated learning for students with special needs (Performance of Special Needs Students);
- identifying the characteristics of the School System's graduate; building on the launch of the Academies of Nashville; continuing efforts to garner support and engagement from business; and using teacher collaboration, professional development, and project-based student learning to transform instruction (Performance of High School Students);
- continuing to build a districtwide vision and implementation of the 16 characteristics of middle schools, creating an aligned system of curriculum and assessment, building teacher capacity through professional development, and establishing a school culture that embraces practices and services to support the whole child (Performance of Middle Prep Students);
- ensuring the use of effective instructional practices with disadvantaged youth, aligning curricular resources and data to make instructional decisions, reducing the negative impact of mobility on learning, and increasing student and family supports for health and social services (Performance of Disadvantaged Students);
- redesigning the Human Resources Department to become a high-performing human capital system, hiring a professional development director to lead the efforts, and working at the state level to inform changes to both the teacher and principal evaluation systems (Human Capital);
- framing instructional and operational technology around the federal National Education Technology Plan, supporting instruction and student learning through training and the use of electronic learning tools, updating and supporting the technology infrastructure of the School System, and expanding the capabilities and use by staff of the Data Warehouse (Information Technology);
- implementing a plan for both internal and external communications, focusing on connecting communications to the classroom, and creating a common knowledge base and a more collaborative culture within the central office (Communications); and

- ongoing monitoring and adjusting of central office structures, roles, and resources; creating a culture and developing leaders to support the vision and beliefs of the School System, and benchmarking and measuring the effectiveness of central office leadership practice (Central Office).

Ongoing discussions among the School System, the Annenberg team, and the National Advisory Panel raised concerns about the difficulties in managing 46 initiatives in a complex organization like a school district. Specifically, cautions were voiced relating to the inherent difficulties in achieving unity of understanding and purpose across multiple initiatives and whether the depth, spread, and ownership of the initiatives required to ensure a change in the system's culture could be achieved. To ameliorate these potential project weaknesses, two recommendations for moving *Metropolitan Nashville Public Schools Achieves* forward were made by members of the National Advisory Panel. First, the School System should consider 'bundling' the initiatives as a means of reducing the number being implemented. The bundling should occur after the initiatives are prioritized and any explicit connections between and among them determined. Second, the School System should selectively abandon those initiatives perceived as lower priorities in order to better focus efforts and maximize available resources.

The preliminary findings for year three of the project listed a number of accomplishments including increased public confidence, improvements at the high school level, progress on inclusion for English language learners and special needs students, enhancement and use of the system's data infrastructure, development of increased instructional leadership capacity, and some improvements in the culture of the School System such as higher expectations for students. Areas of continuing need included becoming more academically focused at the classroom level, achieving more coherence among the system's multiple initiatives, improving communication between the central office and the schools, and meeting the challenges related to the evaluation of teachers and other professional personnel.

While the *Metropolitan Nashville Public Schools Achieves* initiatives are impressive, they are probably too extensive to manage effectively and, therefore, need a narrower focus if the desired changes are to be realized. To that end, the School System should revisit the strategies for improving student performance.

One such strategy that has significant support in research is making student assignments on the basis of changing the socioeconomic mix of low performing schools. A number of studies conducted from the 1960s through 2000 have linked a school's socioeconomic status with student achievement. A re-analysis of the landmark 1966 Coleman Report found that "the social class of the school matters even more to student achievement than does the socioeconomic status of the family." A 2005 University of California study found that "a school's socioeconomic status had as much impact on the achievement growth of high school students in math, science, reading, and history as a student's individual economic status." Data for fifteen-year-olds from the 2006 Programme for International Student Assessment in science showed a "clear advantage in attending a school whose students are, on average, from more advantaged socioeconomic backgrounds." An independent examination of those data showed that Finland, whose secondary education program is often described as excellent, had the very lowest degree of socioeconomic segregation among the 57 participating countries.

Children learn from each other as well as from the teacher. Research has shown that students in high-poverty schools are generally less academically engaged, less likely to do homework, and less likely to

graduate. They are more likely to move during the school year creating disruptions to their academics, and are far less likely to have parents that are engaged in their school life due to such factors as work-place commitments and lack of transportation. Unfortunately, many times the high-poverty schools are also the low-performing ones. The 2007 National Assessment of Educational Progress 4<sup>th</sup> grade math results show that as the percentage of students eligible for a free or reduced price lunch increases, the score on the math test decreases. Although the percentage decrease was slightly greater for middle class students, their scores were higher at all levels than those of low-income students. It is important to note that African American and Hispanic students are the ones most represented in high-poverty, low-income schools.

Traditional turnaround efforts have had mixed results. Approaches that replace staff, use external improvement teams, offer mentoring/coaching by retired school personnel, require additional work on the part of staff such as expanded improvement plans have had little positive long-term effects on improving student achievement. Even some of the most successful charter schools like Knowledge Is Power Program and the Harlem Children’s Zone Promise Academies are difficult to scale due to how each chooses to deal with parents, students, and teachers. However, the turnaround model that seems to be the most successful “is one that seeks to turn high-poverty schools into magnet schools that change not only the faculty but also the student and parent mix in the school.”

The School System had 18 ‘magnet’ school programs in 2013-2014: five serving the elementary grades (PreK-4 or K-4), eight serving the middle grades (5-8 or 7-8), and five serving the high school grades (9-12). The program emphasis of the magnets varies with Science Technology Engineering Math (STEM) and other math/science combinations being the most common. However, based on Academic Performance Framework data, it does not appear that the magnet schools, as presently constituted, or the areas of program emphasis, are contributing to improved academic performance. What does seem to be impacting performance is, as Kahlenberg suggests, the poverty level of students attending the various magnets. The schools with high-poverty levels as determined by the percentage of students eligible for free and reduced-priced meals are the ones less likely to reach or maintain either of the two highest Academic Performance Framework ratings, *achieving* or *excelling* as shown in **Exhibit 2-22**.

**Exhibit 2-22  
The Metropolitan Nashville Public Schools' Magnet Programs**

School	Grades	Program Emphasis	Overall Academic Performance			Percent	
			2011	2012	2013	Free/ Reduced Price Meals	Minority
Robert Churchwell*	PreK-4	Museum	T	S	T	93.9	96.8
Bailey*	5-8	STEM	T	T	T	92.9	85.0
Carter-Lawrence	PreK-4	Math/Science	R	S	S	92.9	85.0
Hattie Cotton	PreK-4	STEM	T	A	R	92.8	83.0
Pearl-Cohn	9-12	Entertainment	S	T	T	86.4	94.4
John Early*	5-8	Museum	S	S	T	85.0	88.7
Stratford	9-12	STEM	A	T	R	81.2	73.4
Hull-Jackson	PreS-4	Montessori	R	S	S	76.5	96.6
Jones	K-4	Paideia	S	S	S	71.5	96.9
I.T. Creswell	5-8	Performing/visual arts	S	T	R	68.8	75.6
East Nashville	5-8	Paideia	S	S	S	65.2	81.9
	9-12		R	R	S		
Rose Park	5-8	Math/Science	A	E	A	56.7	75.6
Head	5-8	Math/Science	A	E	A	44.4	73.4
MLK Jr.	7-8	Science Research/ Math/AP	S	A	S	28.8	55.2
	9-12		E	E	E		
Meigs	5-8	Liberal Arts	E	E	E	23.6	39.0
Hume-Fogg	9-12	Honors/AP	E	S	A	19.0	34.1
<b>District</b>						<b>72.4</b>	<b>68.2</b>

Source: Metropolitan Nashville Public Schools Academic Performance Framework; Tennessee Department of Education 2013 School Level Data Files.

\*Magnets in the school turnover group.

Many districts are improving student achievement for all students by taking actions to attract students and parents from low-poverty into disadvantaged areas and vice versa. Data from the 2007 National Assessment of Educational Progress for 4th grade math show that low-income students attending more affluent schools scored almost two years ahead of low-income students in high-poverty schools. More than 65 school districts have acted to reduce concentrations of school poverty by employing socioeconomic status in some fashion in their student assignment policies. Given that the overarching purpose of the School System transformational change efforts is to improve student academic performance, it is strongly suggested that the reduction of high-poverty school populations be given high priority.

#### **RECOMMENDATION 2-A.1**

**Develop a plan for reducing the concentrations of high-poverty populations in existing K-8 magnet schools.**

The School System should:

- revisit the work of the Performance of Disadvantaged Youth Transformational Leadership Group as related to the reduction of high levels of poverty in magnet schools;

- implement a process for obtaining input from students, parents, teachers, and administrators of existing magnet schools on the successes and challenges of current magnet school design;
- conduct focus groups, town hall meetings, surveys, and related activities to identify additional themes, program incentives, or pedagogical approaches for consideration in existing and future magnet schools that would attract students to schools they would not normally attend;
- identify districts that have been successful in reducing concentration of high-poverty school populations;
- review the policies of the identified districts and develop one for consideration by the Board of Education for use in the School System; and
- establish the 2016-2017 school year as the goal for implementing the new design.

### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

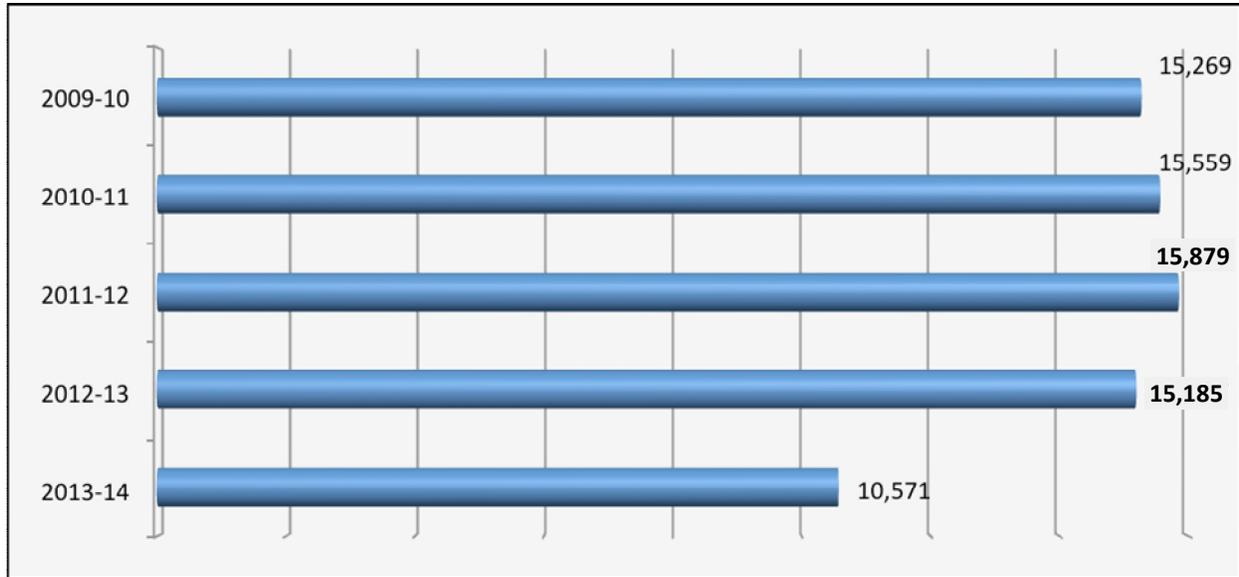
### **STUDENT BEHAVIORAL MANAGEMENT**

#### **OBSERVATION 2-B**

**The School System has not managed student behavior effectively resulting in a large number of students and a disproportional number of African American students being disciplined. Removing students from the classroom for disciplinary reasons has significant negative academic outcomes and may result in lower academic achievement or academic failure, student academic disengagement, truancy, retention, increased contact with the juvenile justice system, and dropout.**

The School System has used exclusionary disciplinary actions such as in-school suspensions, out-of-school suspensions and expulsions extensively. The number of students disciplined using these exclusionary approaches has remained high or increased since 2009-2010, and is continuing throughout the first six months of 2013-2014. Approximately 20 percent of the School System's students, or an average of about 15,500 students a year, have been sent to in-school suspension annually from 2009-2010 through 2012-2013 as illustrated in **Exhibit 2-23**.

**Exhibit 2-23**  
**Total Number of Students with In-School Suspensions 2009-2010 to 2013-2014\***

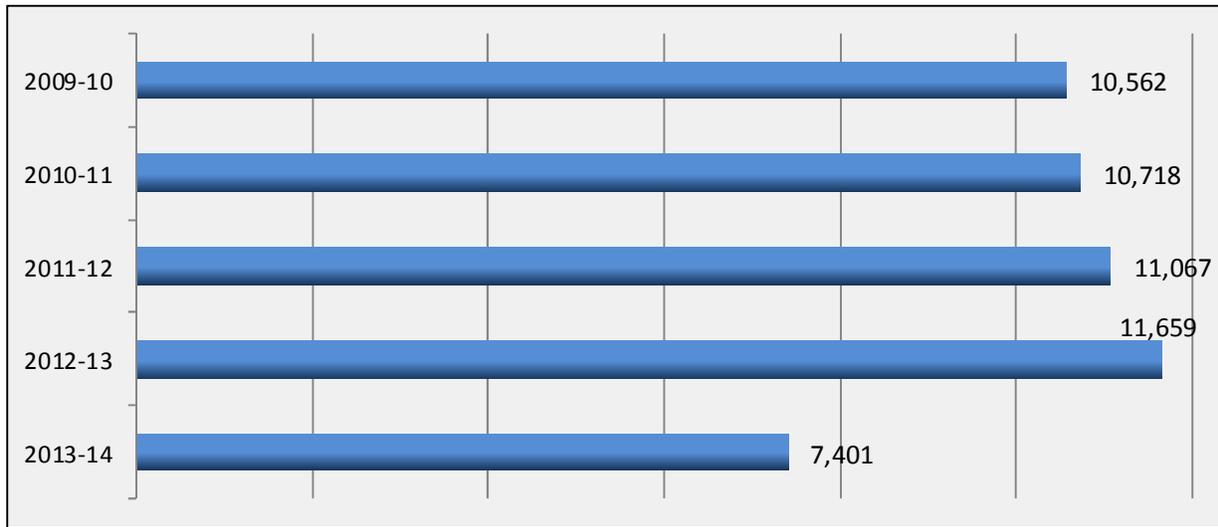


Source: Metropolitan Nashville Public Schools, In-school suspension counts. Office of Chief Support Services Officer, February 12, 2014.

\*The 2013-2014 data are through January 31, 2014.

**Exhibit 2-24** shows that about 14 percent or 11,000 students a year also received out-of-school suspensions between 2009-2010 and 2012-2013. The number of students receiving out-of-school suspensions has increased each year from 2009-2010 through 2011-2012 and remained high in 2012-2013 and through January 31, 2014.

**Exhibit 2-24**  
**Total Number of Students with Out-of-School Suspensions 2009-2010 to 2013-2014\***

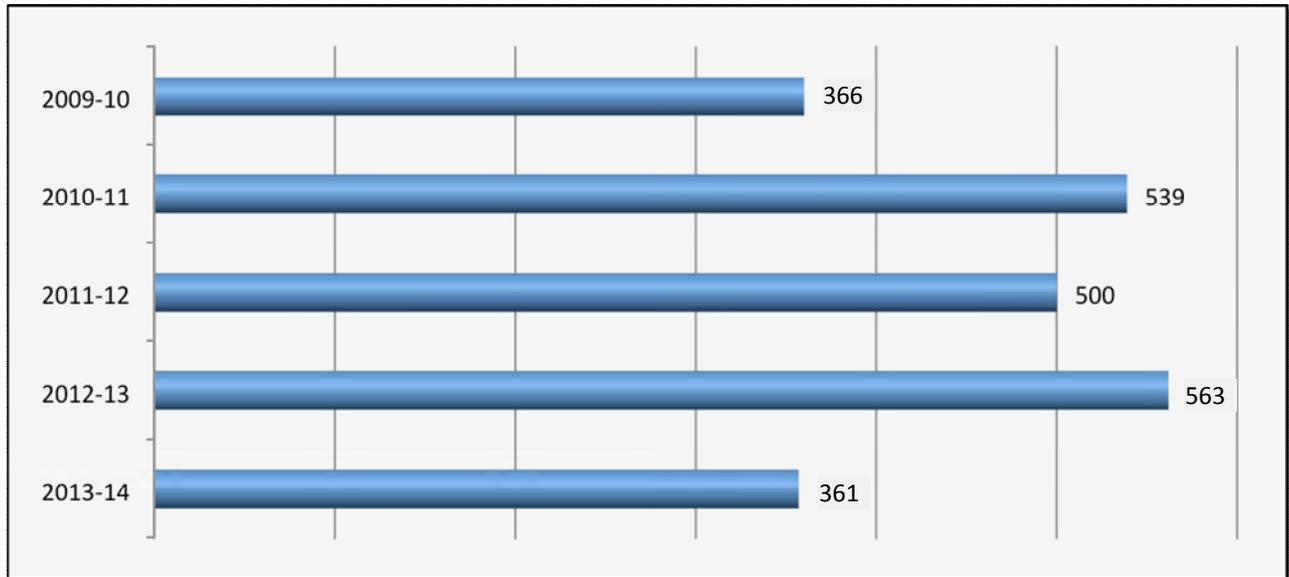


Source: Metropolitan Nashville Public Schools, Counts, Office of Chief Support Services Officer, February 7, 2014.

\*The 2013-2014 data are through January 31, 2014.

Expulsion is a more severe form of discipline involving removal from attendance at school for more than ten consecutive days or more than fifteen days in a month of school attendance. The number of expulsions increased almost 50 percent from 2009-2010 to 2010-2011. Expulsions ranged between 500 and 562 cases between 2010-2011 and 2012-2013, and remained high also in the first six months of 2013-2014 as shown in **Exhibit 2-25**.

**Exhibit 2-25**  
**Total Number of Students Expelled 2009-2010 to 2013-2014\***



Source: Metropolitan Nashville Public Schools, Office of Chief Support Services Officer, February 12, 2014.

\*The 2013-2014 data are through January 31, 2014.

The School System meted out, on average, more than 43,000 in-school suspensions a year between 2009-2010 and 2012-2013. High school students accounted for between 53.5 and 55.6 percent of the students with in-school suspensions, and middle school students accounted for between 42.3 and 46.4 percent. During the first six months of 2013-2014, high school students accounted for 57.5 percent of students with in-school suspensions, and middle school students accounted for 42.1 percent, as shown in **Exhibit 2-26**.

**Exhibit 2-26  
Number and Percentage of Students with In-School Suspensions by School Level  
2009-2010 to 2013-2014\***

	2009-2010		2010-2011		2011-2012		2012-2013		2013-2014	
	N	Percent								
Total Number of Students	15,269	100%	15,559	100%	15,879	100%	15,185	100%	10,571	100%
Elementary School Students (PK-4)**	322	2.1%	26	0.1%	28	0.2%	33	0.2%	41	0.4%
Middle School Students (Grades 5-8)	6,464	42.3%	7,089	45.6%	7,210	45.4%	7,046	46.4%	4,456	42.1%
High School Students (Grades 9-12)	8,483	55.6%	8,446	54.3%	8,641	54.4%	8,106	53.4%	6,074	57.5%
Number of Incidents	43,152		44,066		44,744		41,254		21,947	

Source: Metropolitan Nashville Public Schools, Discipline, Office of Chief Support Services Officer, February 12, 2014.

\*The 2013-2014 data are through January 31, 2014.

\*\*The number of elementary school students includes PK.

The School System also experienced, on average, about 22,000 out-of-school suspension incidents between 2009-2010 and 2012-2013. High schools students accounted for between 43.7 and 48.6 percent of students who received out-of-school suspensions, and middle school students accounted for between 39.4 and 41.5 percent. During the first six months of 2013-2014, high school students accounted for 48.7 percent of the students receiving out-of-school suspensions, and middle school students accounted for 38.0 percent, as shown in **Exhibit 2-27**.

**Exhibit 2-27  
Number and Percentage of Students with Out-of-School-Suspensions by School Level  
2009-2010 to 2013-2014\***

School Levels	2009-2010		2010-2011		2011-2012		2012-2013		2013-2014	
	N	Percent								
Total Number of Students	10,562	100%	10,718	100%	11,067	100%	11,659	100%	7,401	100%
Elementary School Students (PK-4)*	1,266	12.0%	1,349	12.6%	1,496	13.5%	1,729	14.8%	983	13.3%
Middle School Students (Grades 5-8)	4,162	39.4%	4,319	40.3%	4,493	40.6%	4,838	41.5%	2,816	38.0%
High School Students (Grades 9-12)	5,134	48.6%	5,050	47.1%	5,078	45.9%	5,092	43.7%	3,602	48.7%
<b>Total Number of Incidents</b>	<b>21,284</b>		<b>21,112</b>		<b>21,973</b>		<b>23,141</b>		<b>12,320</b>	

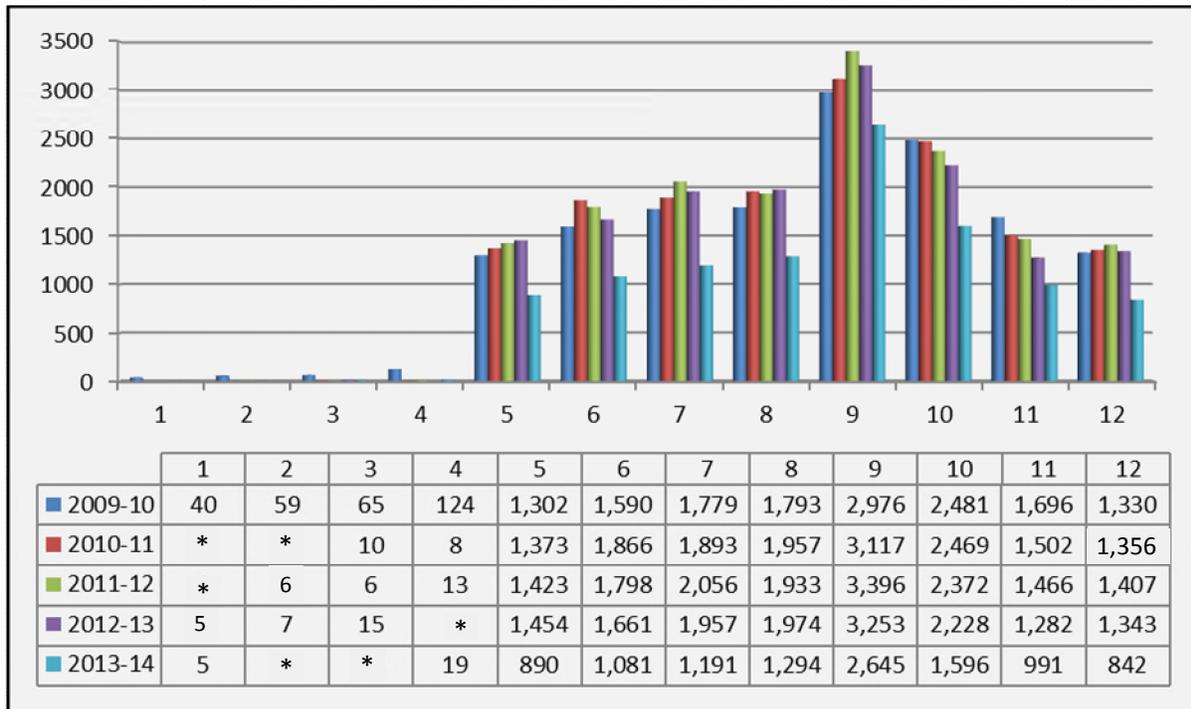
Source: Metropolitan Nashville Public Schools, Discipline, Office of Chief Support Services Officer, February 7, 2014.

\*The number of elementary school students includes PK students.

\*\*The 2013-2014 data are through January 31, 2014.

The analysis of disciplinary actions by grade level points to students in the ninth and tenth grades as accounting for the largest number of students disciplined across all disciplinary action categories, followed by seventh and eighth grade students. On average, nearly 3,200 ninth grade and nearly 2,400 tenth grade students received in-school suspensions between 2009-2010 and 2012-2013 as presented in **Exhibit 2-28**. In-school suspensions were also high among seventh and eighth grade students who averaged more than 1,900 in-school suspensions a year.

**Exhibit 2-28  
Number of Students with In-School Suspensions by Grade Level  
2009-2010 to 2013-2014\*\***



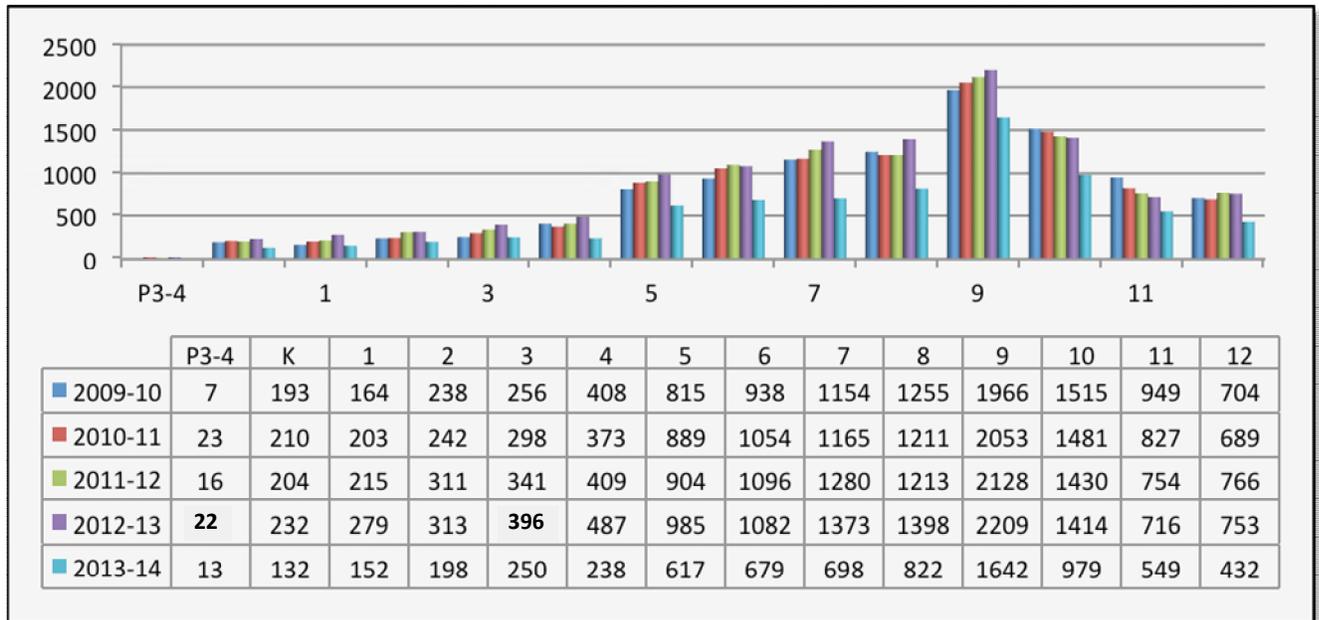
Source: Metropolitan Nashville Public Schools, Discipline, Office of Chief Support Services Officer, February 12, 2014

\*The number and percentage of students in Grades 1-4 are not shown in compliance with the Family Educational Rights and Privacy Act (FERPA) because one or more of these grade levels had fewer than five students with in-school suspensions.

\*\*The 2013-2014 data are through January 31, 2014.

The same pattern was also evident with regard to out-of-school suspensions. On average, ninth grade students accounted for about 2,100 out-of-school suspensions a year between 2009-2010 and 2012-2013; tenth grade students accounted on average for about 1,500 out-of-school suspensions. Seventh and eighth grade students averaged between 1,243 and 1,269 out-of-school suspensions, respectively as reflected in **Exhibit 2-29**.

**Exhibit 2-29  
Number of Students with Out-of-School-Suspensions by Grade Level  
2009-2010 to 2013-2014\***



Source: Metropolitan Nashville Public Schools, Discipline, Office of Chief Support Services Officer, February 7, 2014.  
\*The 2013-2014 data are through January 31, 2014.

Among the out-of-school suspension offense categories, violation of school rules and fighting represented the two major offense categories, accounting for more than 80 percent of students with out-of-school suspension offenses as shown in **Exhibits 2-30 and 2-31**. Between 61.2 and 63.0 percent, or nearly 8,900 students, on average, violated school rules between 2009-2010 and 2012-2013; 66.3 percent or 6,001 students violated school rules in the first six months of 2013-2014. Between 18.6 and 21.3 percent, or an average of 2,800 students, committed a fighting offense between 2009-2010 and 2012-2013; 17.6 percent, or 1,590 students, did so in the first six months of 2013-2014.

**Exhibit 2-30  
Number and Percentage of Students by Out-of-School Suspension Offense Categories  
2009-2010 to 2013-2014**

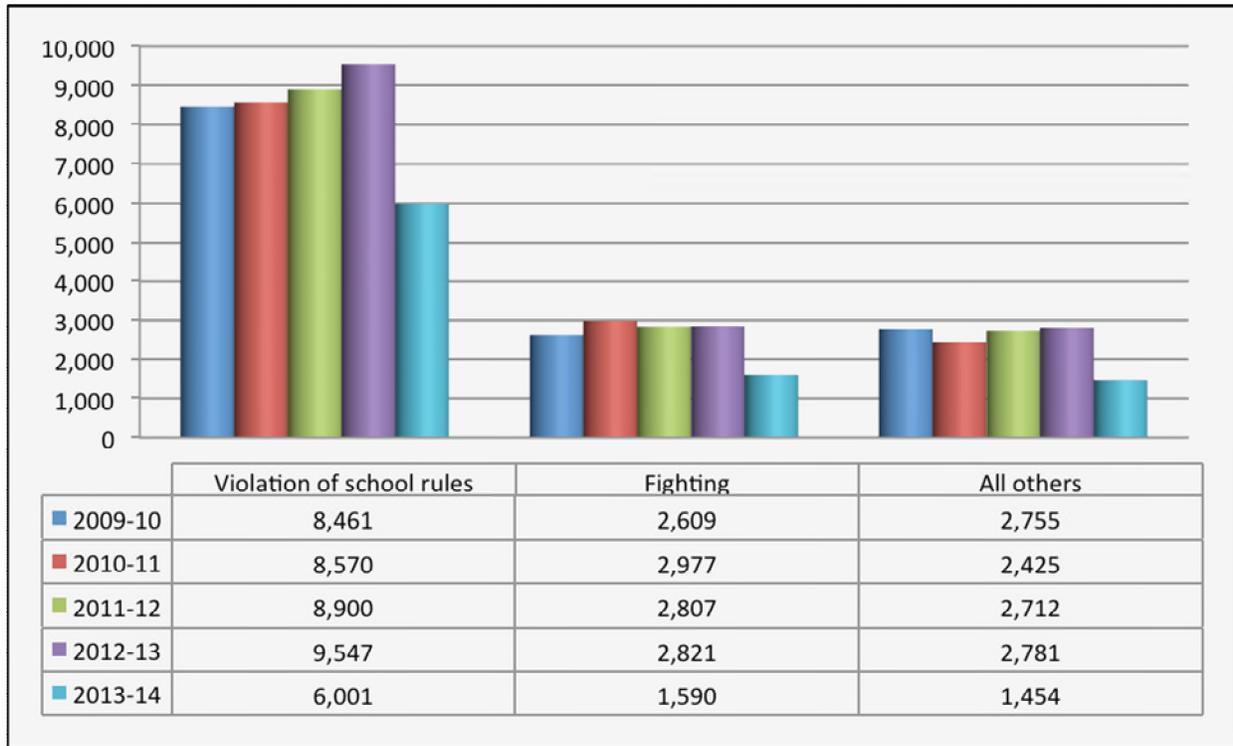
Out of School Suspension Offense Category	2009-2010		2010-2011		2011-2012		2012-2013		2013-2014	
	N	Percent								
Aggravated assault of student	11	0.1	15	0.1%	26	0.2%	14	0.1%	6	0.1%
Aggravated assault of teacher or staff	37	0.3%	7	0.1%	8	0.1%	*	*	*	*
Assault of student	482	3.5%	466	3.3%	489	3.4%	533	3.5%	249	2.8%
Assault of teacher or staff	124	0.9%	83	0.6%	65	0.5%	33	0.2%	19	0.2%
Bomb threat	*	*	*	*	*	*	*	*	*	*
Bullying	376	2.7%	548	3.9%	578	4.0%	411	2.7%	220	2.4%
Fighting	2,609	18.9%	2,977	21.3%	2,807	19.5%	2,821	18.6%	1,590	17.6%
Non-lethal firearm	66	0.5%	37	0.3%	33	0.2%	20	0.1%	0	0.0%
Other type of threat	590	4.3%	456	3.3%	459	3.2%	518	3.4%	289	3.2%
Possession of explosive/incendiary device	*	*	*	*	0	0.0%	0	0.0%	0	0.0%
Possession of handgun	*	*	*	*	*	*	0	0.0%	*	*
Possession of weapon other than firearm	111	0.8%	88	0.6%	99	0.7%	95	0.6%	74	0.8%
Possession/Use/Distribution of alcohol	23	0.2%	49	0.4%	19	0.1%	44	0.3%	28	0.3%
Possession/Use/Distribution of illegal drugs	156	1.1%	33	0.2%	234	1.6%	294	1.9%	150	1.7%
Sexual assault	13	0.1%	12	0.1%	12	0.1%	5	0.0%	5	0.1%
Sexual harassment	212	1.5%	169	1.2%	163	1.1%	182	1.2%	93	1.0%
Theft of property	285	2.1%	251	1.8%	283	2.0%	376	2.5%	196	2.2%
Vandalism/Damage of property	269	2.0%	211	1.5%	244	1.8%	256	1.7%	125	1.4%
Violation of school rules	8,461	61.2%	8,570	61.3%	8,900	61.7%	9,547	63.0%	6,001	66.3%
<b>Total Number of Students</b>	<b>13,830</b>		<b>13,975</b>		<b>14,423</b>		<b>15,153</b>		<b>9,051</b>	
<b>Number of Incidents</b>	<b>22,629</b>		<b>22,373</b>		<b>23,331</b>		<b>24,276</b>		<b>13,082</b>	

Source: Metropolitan Nashville Public Schools, Discipline, Office of Chief Support Services Officer, February 7, 2014.

\*The number and percentage of students not shown for specific offenses in compliance with the Family Educational Rights and Privacy Act (FERPA) because one or more of these offenses involved fewer than five students.

\*\*The 2013-2014 data are through January 31, 2014.

**Exhibit 2-31  
Number and Percentage of Students by Out-of-School Suspension Offense Categories  
2009-2010 to 2013-2014**



Source: Metropolitan Nashville Public Schools, Discipline, Office of Chief Support Services Officer, February 7, 2014  
\*The 2013-2014 data are through January 31, 2014.

On average, 515 students were expelled annually between 2009-2010 and 2012-2013; 366 were expelled in the first six months of 2013-2014. Between 76.6 and 85.9 percent of students who were expelled between 2009-2010 and 2013-2014 were high school students, and between 14.8 and 33.6 percent were middle school students as presented in **Exhibits 2-32**.

**Exhibit 2-32  
Number and Percentage of Middle School and High School Students Expelled  
2009-2010 to 2013-2014**

Grades	2009-2010		2010-2011		2011-2012		2012-2013		2013-2014	
	N	Percent								
Total Number of Students	366	100%	539	100%	500	100%	563	100%	361	100%
Middle School Students (Grades 5-8)	54	14.8%	89	33.6%	97	19.4%	126	22.4%	51	14.1%
High School Students (Grades 9-12)	308	84.2%	440	81.6%	400	80.0%	431	76.6%	310	85.9%
Number of Incidents	364		548		508		566		366	

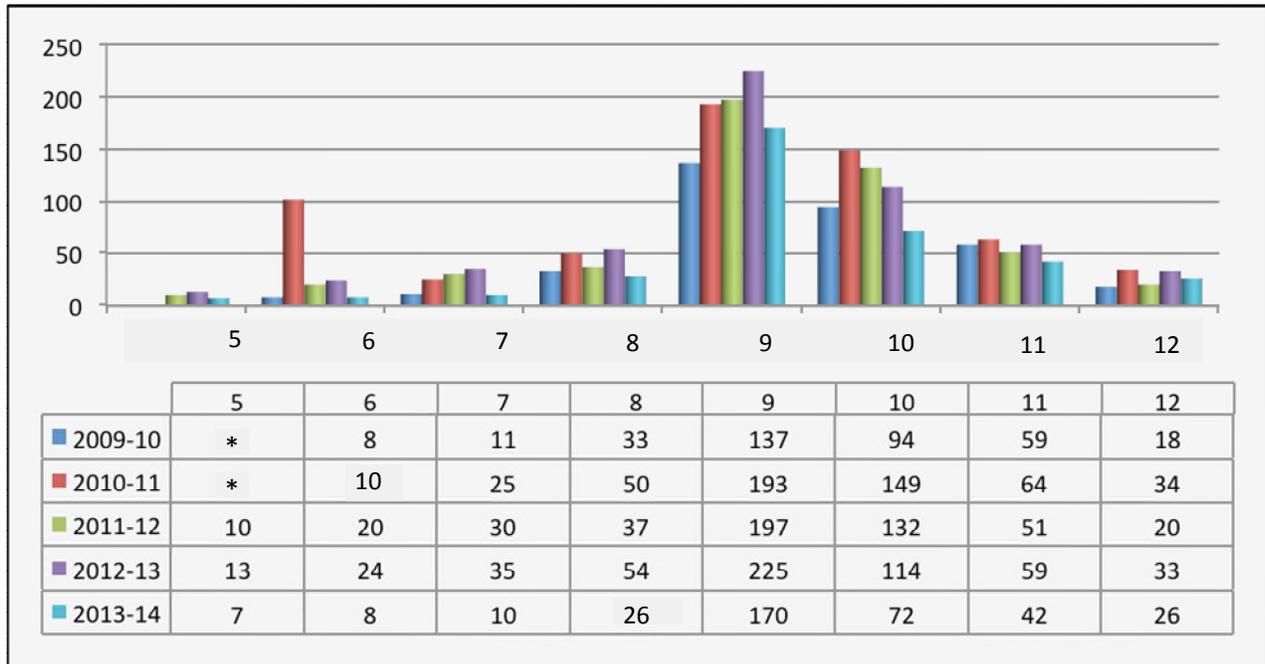
*Source: Metropolitan Nashville Public Schools, Discipline, Office of Chief Support Services Officer, February 12, 2014.*

*\*The 2013-2014 data are through January 31, 2014.*

*\*\*Elementary school students are not included because the number expelled was five or higher only in two of the five years.*

A similar grade level pattern for expulsions as for in-school and out-of-school suspensions emerged. Ninth grade students constituted the largest group of students expelled, ranging from 137 students in 2009-2010 to 225 in 2012-2013. In the first six months of 2013-2014, 170 ninth grade students were expelled as presented in **Exhibit 2-33**. Ninth grade students accounted for between 37.4 and 47.1 percent of expulsions.

**Exhibit 2-33  
Number of Students Expelled by Grade Level  
2009-2010 to 2013-2014\***



Source: Metropolitan Nashville Public Schools, Discipline, Office of Chief Support Services Officer, February 12, 2014.

\*The 2013-2014 data are through January 31, 2014.

\*\*The number of students not shown (\*) are in compliance with the Family Educational Rights and Privacy Act (FERPA) because one or more of these grade levels had fewer than five students expelled.

Prior to 2013-2014, student behavior management was an individual school responsibility and was not addressed at the School System level. While the School System has a code of conduct, based on the state of Tennessee's, principals have been given discretion to implement discipline procedures in ways they considered most advantageous to their schools. Consequently, implementation has not been consistent systemwide.

The School System has implemented several behavior management programs. Many elementary schools implemented the School Wide Positive Behavior Support program, and, in 2013-2014, the middle schools implemented the Why Try program which uses social workers to work with at-risk students. The Why Try program is research-based and aims to reduce failure and expulsion, decrease rule-breaking behaviors, improve self-concept and emotional health, increase resiliency as well as improve students' academic progress, performance, and graduation rates. Under this program, social workers meet weekly with individuals or small groups of students with high rates of suspensions. The School System also implemented a First Time Drug Offenders program which aims to avoid the mandatory year expulsion for students with drug offenses. Under this program students with a first drug offense receive a five-day expulsion and must attend a Saturday class.

The detrimental impact of suspensions on students' academic achievement has been demonstrated in multiple studies:

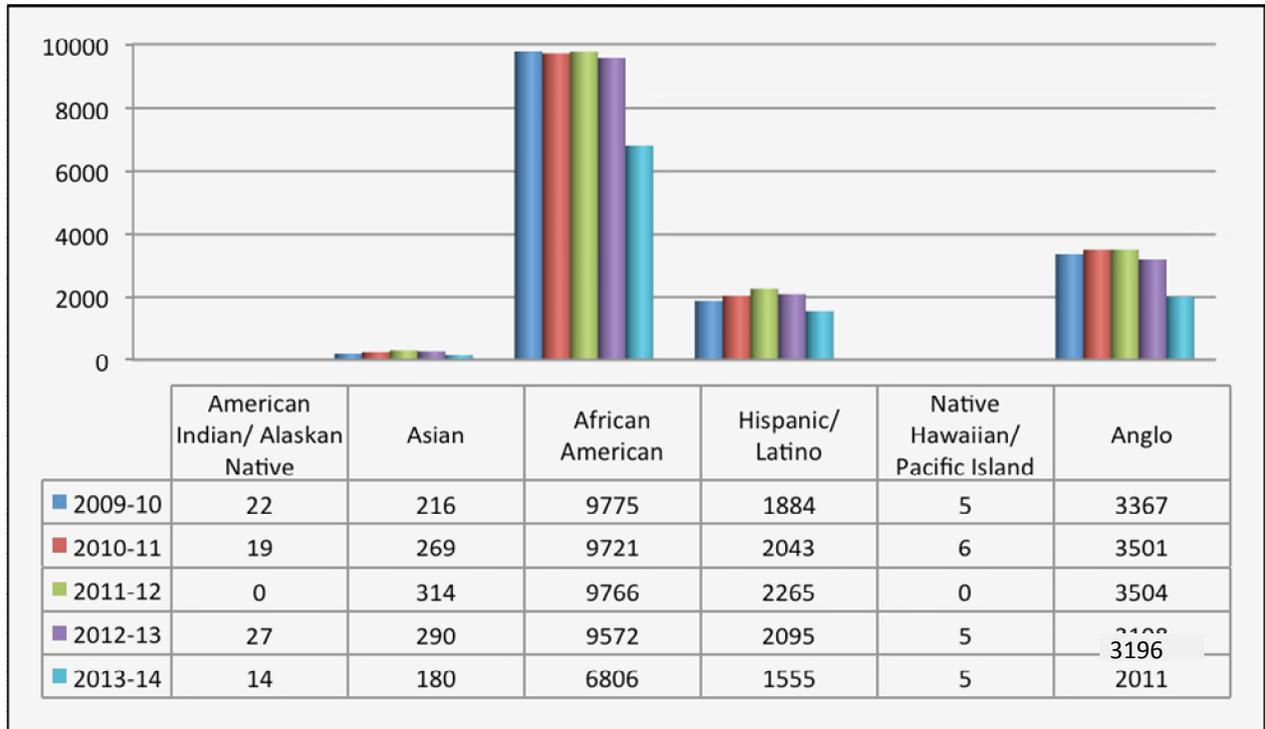
- According to a Florida study, 73 percent of ninth grade students who were suspended failed their courses compared with 36 percent of students who were not suspended.
- Even one suspension doubles the dropout risk and each additional suspension increases the dropout risk by 20 percent, according to this study.
- Suspension and expulsion for a discretionary school violation nearly triples a student's likelihood of contact with the juvenile justice system within the subsequent year.

In addition to a high and persistent rate of disciplinary actions, the School System's disciplinary actions data shows racial disparity with regard to African American students, a problem not unique to the School System. National studies indicate that African American students are 1.78 times more likely to receive out-of-school suspensions than Anglo students, twice as likely at the elementary level as Anglo students to be given disciplinary referrals, and four times as likely at the secondary level. The rate of out-of-school suspensions for African American elementary school students is 5.5 percent higher than the rate for Anglo students, and 17 percent higher at the secondary level. African American students with disabilities are also likely to face disciplinary actions at a disproportional rate. Nationally, 25 percent of African American students with disabilities received an out-of-school suspension at least once in 2009-2010.

In the School System from 2009-2010 through 2012-2013:

- More than 60 percent of the students given in-school suspension were African American, although African American students comprise about 45 percent of the student population (**Exhibit 2-34**).
- More than two-thirds of the students given out-of-school suspension were African American. In 2012-2013, nearly 70 percent of the students given out-of-school suspensions were African American (**Exhibit 2-35**).
- More than 60 percent of the students who were expelled between 2009-2010 and January 31, 2014 were African American. Through January 2014, 77.6 percent of the students expelled were African American (**Exhibit 2-36**).

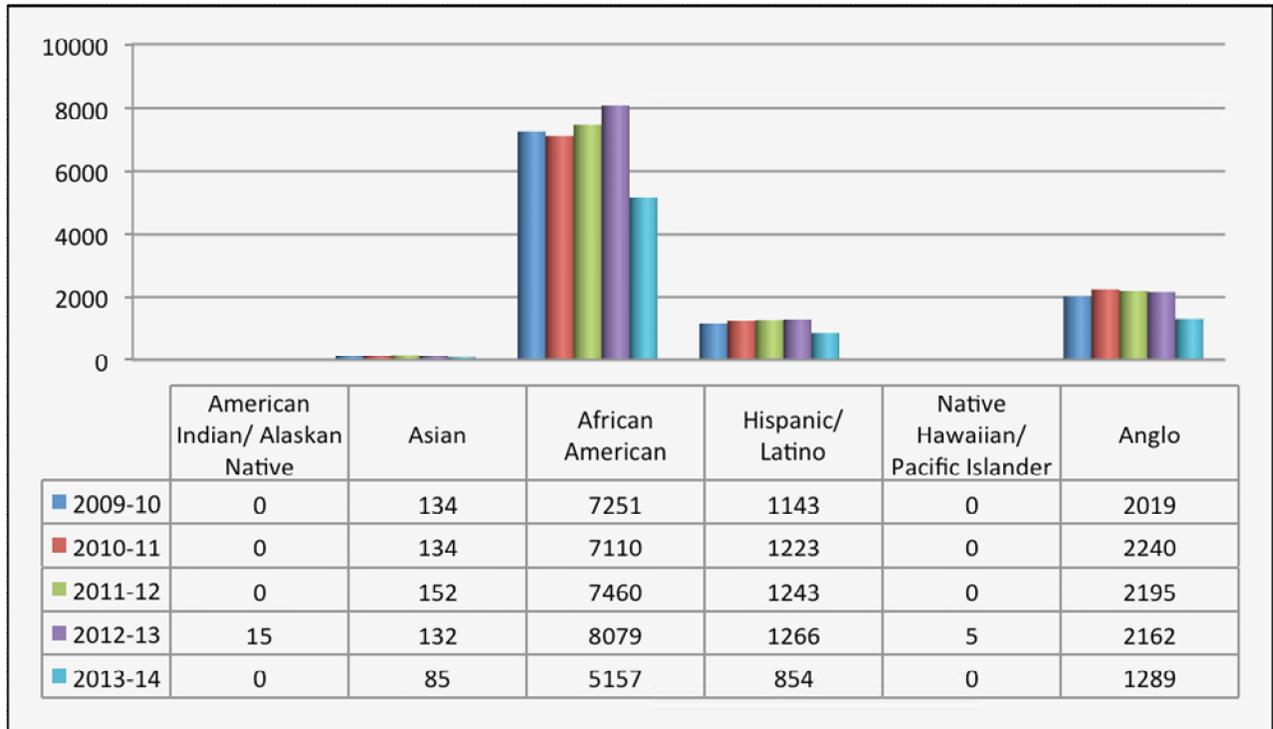
**Exhibit 2-34**  
**Number of Students with In-School Suspensions by Ethnicity**  
**2009-2010 to 2013-2014**



Source: Metropolitan Nashville Public Schools, In-School Suspension Counts. Office of Chief Support Services Officer, February 12, 2014.

\*The 2013-2014 data are through January 31, 2014.

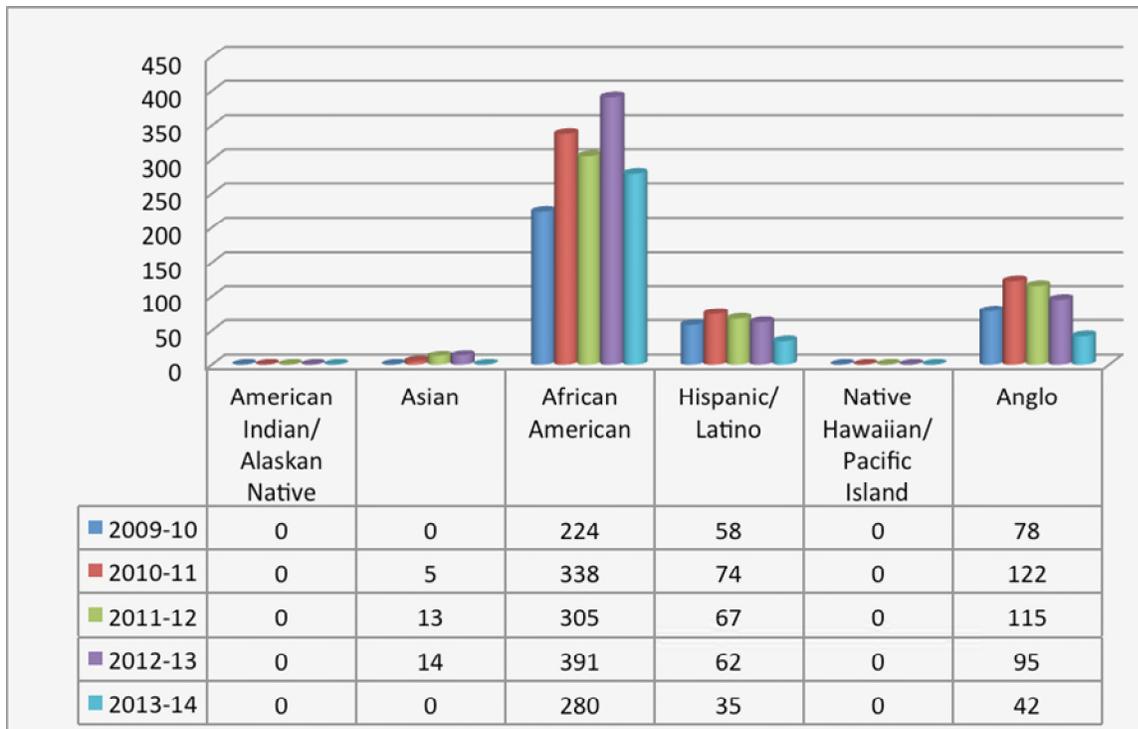
**Exhibit 2-35**  
**Number of Students with Out-of-School Suspensions by Ethnicity**  
**2009-2010 to 2013-2014**



Source: Metropolitan Nashville Public Schools, Out-of-School Suspension Counts, Office of Chief Support Services Officer, February 7, 2014.

\*The 2013-2014 data are through January 31, 2014.

**Exhibit 2-36  
Number of Students Expelled by Ethnicity  
2009-2010 to 2013-2014**



Source: Metropolitan Nashville Public Schools, Office of Chief Support Services Officer, February 12, 2014.

\*The 2013-2014 data are through January 31, 2014.

Research has shown that the disproportional rates of disciplinary actions involving African American students cannot be explained by poverty, more frequent misbehavior, or more aggressive behavior. These disparities are more likely to be explained by school-level variables such as the achievement gap, the level of ethnic/racial diversity of the faculty relative to students' diversity, classroom and office processes, and school climate.

An extensive body of research shows that excessive disciplinary actions harm all students, teachers, and the school climate and culture; are neither educationally nor economically efficient; and do not result in safer schools. A series of studies supported by Atlantic Philanthropies and the Open Society Foundations found that:

- Disciplinary disparities may be a result of inequity in the distribution of resources with fewer high quality teachers assigned to schools with fewer and poorer resources, and a high percentage of minorities. This results in higher rates of teacher turnover, lower student engagement, and fewer well-managed classrooms.
- Non-minority teachers may lack knowledge and understanding of their students' culture, an important component of learning. Nationally, 9.3 percent of the teaching force is African American, 7.4 percent is Hispanic, 2.3 percent is Asian, and 1.2 percent is another race, compared with 80 percent Anglo.

- Disparity-reducing intervention efforts are more productive by focusing on changing the school climate and culture. While high suspension rates may increase feelings of safety, they also diminish the school climate. Strong student-teacher and parent-teacher relationships are associated with decreased suspension rates and the promotion of an increased sense of safety.

Effective behavior management practices promote the application of alternative discipline systems that reduce reliance on punitive and exclusionary approaches. While the practices below have been effective overall, they were not effective in reducing discipline-related racial disparities:

- Code of Conduct changes from a reactive, punitive and exclusionary approach to a preventive approach to discipline with an increased use of non-punitive responses to student misbehavior and limited use of suspension and expulsion.
- Structural interventions such as Positive Behavior Interventions and Supports, changing disciplinary codes of conduct and Threat Assessment have been shown to reduce use of exclusionary disciplinary rates. The School System has modified its zero tolerance drug offense behavior code through its First Time Drug Offender program offering opportunities to first drug offenders to expedite their return to the classroom.
- Social-emotional learning approaches improve schools' ability to understand and regulate students' social interactions and emotions, and reduce student misbehavior and out-of-school suspensions. As one of eight school districts nationally, Metropolitan Nashville School System is participating in a Collaborative for Academic, Social, Emotional Learning grant and is implementing a social and emotional learning approach that promotes self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. The approach is implemented in elementary schools and will be piloted in 2014-2015 in two middle schools. For example, Austin Independent School District (Texas), one of the eight districts, has implemented the program in 73 schools serving approximately 47,000 students. In 2012-2013, the freshman class had a 20 percent reduction in class failures and a 28 percent decrease in discipline referrals compared to the freshmen class the year before.

Approaches proven to be highly effective with African American students include:

- Strong teacher-student and parent-student relationships. Schools that promote such relationships through sustained support for teacher development are more effective in keeping schools safe without resorting to use of exclusionary discipline. African American principals in urban schools who promoted parent involvement reduced the rate of suspensions. Research had shown that programs like My Teaching Partner that focus on teacher interactions with students and rely less on exclusionary discipline for all students had a significant impact on reducing exclusionary discipline with African American students.
- Implementation of restorative practices throughout the school aim to proactively build relationships and a sense of community and both prevent and resolve conflict. Some research has shown that such practices may be linked to reduced suspensions and expulsions, decreased disciplinary referrals, and improved academics across all student groups— but most significantly for African American students.

- Use of a protocol that assesses threats of violence without resorting to zero tolerance suspensions has shown to reduce suspensions and African American-Anglo disparities.

### **RECOMMENDATION 2-B.1.**

**Identify and implement behavior management strategies that have been proven effective in reducing the need for disciplinary actions for all students and in reducing racial disparities in discipline.**

The Cluster Support Executive Director should:

- analyze and disaggregate its disciplinary actions data by disciplinary action categories, school, grade level, and student subpopulations;
- undertake a comprehensive review of its discipline policies and code of conduct and assess the effectiveness of its behavior management programs and strategies;
- identify programs, strategies, and practices that have proved effective in managing student behavior and reducing disciplinary actions;
- identify programs, strategies, and practices that have proved effective in addressing and reducing racial disparities in discipline. Adopt discipline approaches that are aligned with effective practices in supporting positive student behavior and in addressing racial disparities; and
- integrate those approaches into a coherent systemwide discipline management plan that incorporates best practices, training programs, monitoring strategies, and annual data analysis to review changes in disciplinary actions.

### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

### **STUDENT DISCIPLINE: MINORITY STUDENTS**

#### **OBSERVATION 2-C**

**The School Systems' African American students and students with disabilities are disproportionately assigned to disciplinary alternative learning centers. Placing students in disciplinary alternative education programs increases their risk level for disengagement from school, academic failure, and dropout.**

Since 2009-2010, the School System has operated four alternative learning centers although the locations and grade level configurations have changed. In 2013-2014, the School System's four centers were located at Glenn Elementary for students in grades K-4, at Middle School Alternative Learning Center for students in grades 5-8, and at Johnson Alternative Learning Center and W.A. Bass Alternative Learning Center for students in grades 9-12. The maximum enrollment at Glenn Elementary is 15 students; 80 students at Middle School Alternative Learning Center; 120 students at Bass Alternative Learning Center; and 150 students at Johnson Alternative Learning Center. Typically, the alternative learning center has a principal, a lead teacher, a teacher for English language learners, an exceptional

education teacher, and a counselor. The alternative learning centers coordinate instruction with students' home schools. Teachers cover all core areas. Additional staff includes a social worker at the Middle School Alternative Learning Center and an assistant principal at the Bass Alternative Learning Center. In addition, a transition specialist follows up with the student after the student returns to the home campus. Before students return to their home campuses, alternative learning center staff has an exit meeting with the student, provides a copy of the student's grades to the home campus, and sends a letter to the home campus notifying them when the student is returning.

From 2009-2010 through 2012-2013, African American students were disproportionately assigned to the School System's alternative learning centers. During that period, African American students represented between 74 and 84 percent of all student referrals to alternative learning centers while their percentage of the total School System's student population ranged between 45.2 and 47.5 as presented in **Exhibit 2-37**.

**Exhibit 2-37  
Number and Percentage of Students by Ethnicity in Alternative Learning Centers  
2009-2010 to 2012-2013**

	African American		Hispanic		Anglo		Total*
	N	Percent	N	Percent	N	Percent	N
<b>2009-2010</b>							
McCann Alternative Learning Center	59	79.7%	7	0.9%	7	0.9%	74
Baxter Alternative Learning Center	138	74.6%	23	12.4%	23	12.4%	185
Cohn Alternative Learning Center	88	80.0%	5	4.5%	16	14.5%	110
Percentage of Ethnic Group in Metropolitan Nashville Public Schools		47.5%	**	15.9%		32.6%	
<b>2010-2011</b>							
McCann Alternative Learning Center	70	84.3%	**	-	**	-	83
Baxter Alternative Learning Center	129	73.7%	16	0.9%	30	17.1%	175
Cohn Alternative Learning Center	100	75.8%	11	0.8%	21	15.9%	132
Percentage of Ethnic Group in Metropolitan Nashville Public Schools		46.8%	**	16.7%		32.3%	

**Exhibit 2-37  
Number and Percentage of Students by Ethnicity in Alternative Learning Centers  
2009-2010 to 2012-2013 (Cont'd)**

	African American		Hispanic		Anglo		Total*
	N	Percent	N	Percent	N	Percent	N
<b>2011-2012</b>							
McCann Alternative Learning Center	61	75.3%	11	13.6%	8	1.0%	81
Baxter Alternative Learning Center	140	79.1%	13	7.3%	24	13.6%	177
Cohn Alternative Learning Center	91	79.1%	6	0.5%	15	13.0%	115
Percentage of Ethnic Group in Metropolitan Nashville Public Schools		46.2%		17.5%		32.0%	
<b>2012-2013</b>							
McCann Alternative Learning Center	81	78.6%	8	7.8%	14	13.6%	103
Baxter Alternative Learning Center	161	75.6%	22	10.3%	27	12.7%	213
Bass Alternative Learning Center	101	80.2%	8	6.3%	13	10.3%	126
Percentage of Ethnic Group in Metropolitan Nashville Public Schools		45.2%		18.8%		31.6%	

Source: Metropolitan Nashville Public Schools, Office of Chief Support Services Officer, February 2014.

\*Total refers to the total number of students remanded to the respective alternative learning center. The exhibit, however, does not show the number of Asian, American Indian or Pacific Islander because fewer than five were remanded to alternative learning centers. This is in compliance with the Family Educational Rights and Privacy Act (FERPA) 34CFR Part 99.1.

\*\*Number of Hispanic and Anglo students is not shown in compliance with FERPA because one of these groups had fewer than five students remanded to alternative learning centers.

This trend has continued in the first half of 2013-2014. Through January 31, 2014 the percentage of African American students in the Middle School Alternative Learning Center, the Bass Alternative Learning Center, and the Johnson Alternative Learning Center ranged from 73.4 to 80.5 compared to their representation in the overall the School System's student population of 44.6. Similarly, the percentage of African American students with disabilities or who are economically disadvantaged that were placed in alternative learning centers was disproportionately higher than their percentage in the total student population and referenced in **Exhibit 2-38**.

Attendance at the alternative learning centers is low compared with the School System's overall attendance rate of 96 percent. The attendance rates at the three centers serving students in grades 5-12 are 12 to 17.5 percentage points lower than the district rate. A contributing factor to low attendance at the high school alternative learning centers is the lack of transportation. High school students assigned to an alternative learning center have to provide their own transportation; consequently, students who

are unable to provide their own transportation are not required to attend which results in jeopardizing their academic performance further.

### Exhibit 2-38

#### Metropolitan Nashville Public Schools and Alternative Learning Center Demographics 2013-2014\*

Demographics	Metropolitan Nashville Public Schools		Middle School Alternative Learning Center	Bass Alternative Learning Center	Johnson Alternative Learning Center
	Number	Percent			
Number of Students	82,863	100.0%	103	94	128
African American Students	36,985	44.6%	76.7%	73.4%	80.5%
Anglo Students	26,496	32.0%	15.6%	10.6%	9.4%
Hispanic Students	15,792	19.0%	7.8%	16.0%	8.6%
English Language Learners	22,291	26.9%	3.9%	1.1%	3.1%
Students with Disabilities	9,930	12.0%	22.3%	20.2%	21.1%
Economically Disadvantaged	55,076	66.5%	93.2%	92.6%	89.8%
Attendance Rate	96.1%		84.1%	78.4%	83.7%
Percent Missing More than 5 Days			47.6%	73.4%	59.4%

Source: Metropolitan Nashville Public Schools Facts 2013-2014 and School Profiles. Metropolitan Nashville Public Schools Middle School Alternative Learning Center School Profile.

\*Data for 2013-2014 is up to January 31, 2014.

Removing students from their home campuses, isolating them from their peers, and transferring them to alternative placements increases their disengagement from school, and contributes to their academic failure and potential for dropping out. Implementing behavior management programs and disciplinary strategies that reduce discipline problems and placements in alternative education settings is critical. Effective programs and strategies associated with lower placements in disciplinary alternative education settings, especially for minority students, include the following:

- positive and caring teacher-student relationships;
- high academic, social and behavioral expectations; preventive and proactive school discipline practices through school wide positive behavior interventions and support;
- parental involvement; restorative practices focusing on meeting student needs, using strategies such as peer courts and other approaches that seek to remedy bad behavior rather than expelling or assigning students to alternative settings; and
- innovative programs such as the Conscious Discipline program which combines social-emotional learning with discipline or the Health Teacher program, an online curriculum that integrates health and health literacy, have shown to significantly reduce the rate of disciplinary problems.

**RECOMMENDATION 2-C.1**

**Implement behavior management strategies that have been proved effective in reducing racial disparities in discipline, especially those associated with placement in disciplinary alternative education settings.**

This recommendation should be implemented as part of the recommendation associated with Observation 2.B dealing with student behavior management overall, and with racial disparities involving all disciplinary categories. With regard to racial disparities in placing students in alternative education centers, The Cluster Support Executive Director should:

- conduct an analysis of the mandatory and non-mandatory reasons for remanding students in general, and minority students in particular to alternative education centers;
- identify programs and behavior management strategies that have proved effective in reducing placements to disciplinary alternative education programs for African American students and students with disabilities;
- incorporate these strategies with the other behavior management and discipline strategies into a comprehensive behavior management framework;
- ensure that the training conducted on student behavior management and discipline addresses the strategies specific to placements in alternative education centers; and
- track and evaluate the effectiveness of these strategies in reducing placements to alternative learning centers for African American students and students with disabilities.

This recommendation can be implemented with existing resources.

**GIFTED AND TALENTED PROGRAM ASSESSMENT****OBSERVATION 2-D**

**The assessment process used by the School System’s Gifted and Talented program does not fully address the identification of gifted students who are members of historically under-represented student populations.**

An audit of the School System’s gifted services in 2012 documented that minority, economically disadvantaged, English Language Learners, and special education students are under-identified in the School System’s K-8 Encore program for the gifted and that “policies and processes for an equitable and fair identification system reflecting the demographic make-up of Metropolitan Nashville were not defined, communicated, or administered consistently across all grade levels and schools.” The audit found that cultural diversity was not acknowledged “in an effective way that identifies or meets the needs of gifted and potentially gifted students.” Furthermore, the assessments used to identify students are not inclusive or evidence-supported and may fall short in identifying culturally diverse students. **Exhibit 2-39** shows participation in Encore from 2009-2010 through January 31, 2014.

**Exhibit 2-39  
Number and Percentage of Overall and Encore Students by School Level and Student Characteristics –  
2009-2010 to 2013-2014**

Level	Enrollment	Student Subpopulations						
		African American	Hispanic	Anglo	Reduced and Free Lunch	Special Ed	English Language Learners	Limited English Proficiency
<b>2009-2010</b>								
Elementary								
Total	35,137	44.4%	18.5%	33.0%	73.0%	12.0%	14.4%	18.6%
Encore	1,470 (4.2%)	21.0%	4.1%	67.4%	26.0%	4.9%	0.7%	2.9%
Middle								
Total	19,843	47.9%	15.7%	32.7%	71.0%	12.1%	8.1%	10.1%
Encore	776 (3.9%)	20.9%	3.9%	68.6%	25.0%	4.0%	0.1%	0.4%
<b>2010-2011</b>								
Elementary								
Total	36,109	44.0%	19.3%	32.8%	75.2%	12.7%	15.0%	19.6%
Encore	1,787 (4.9%)	20.0%	4.8%	66.5%	27.3%	4.2%	0.7%	3.5%
Middle								
Total	18,091	50.0%	15.6%	30.8%	74.1%	13.4%	6.9%	9.0%
Encore	1,127 (6.2%)	20.5%	4.4%	68.3%	27.9%	4.3%	0.0%	0.3%
<b>2011-2012</b>								
Elementary								
Total	37,170	43.3%	19.7%	33.1%	75.2%	12.9%	15.7%	20.3%
Encore	2,043 (5.5%)	18.4%	5.3%	68.0%	28.5%	5.1%	0.8%	2.9%
Middle								
Total	20,592	46.4%	17.4%	32.0%	74.8%	13.4%	8.0%	10.4%
Encore	1,271 (6.2%)	20.8%	6.0%	65.1%	30.3%	3.4%	0.2%	0.3%

**Exhibit 2-39  
Number and Percentage of Overall and Encore Students by School Level and Student Characteristics –  
2009-2010 to 2013-2014 (Cont'd)**

Level	Enrollment	Student Subpopulations						
		African American	Hispanic	Anglo	Reduced and Free Lunch	Special Ed	English Language Learners	Limited English Proficiency
<b>2012-2013</b>								
Elementary								
Total	37,828	42.0%	21.4%	32.6%	76.3%	12.2%	16.6%	21.1%
Encore	1,819 (4.8%)	18.0%	5.8%	68.1%	27.1%	5.1%	0.3%	2.5%
Middle								
Total	21,308	46.1%	18.4%	31.2%	75.5%	13.7%	8.1%	10.9%
Encore	1,418 (6.7%)	23.1%	6.7%	61.8%	35.8%	3.5%	0.1%	0.3%
<b>2013-2014*</b>								
Elementary								
Total	39,130	42.1%	21.8%	32.1%	75.2%	10.8%	18.6%	21.2%
Encore	1,559 (4.0%)	16.8%	4.6%	70.1%	22.5%	5.4%	0.5%	1.9%
Middle								
Total	21,205	45.0%	19.6%	30.8%	75.5%	13.6%	8.1%	11.2%
Encore	1,343 (6.3%)	20.3%	6.4%	64.7%	33.0%	4.4%	0.0%	0.2%

Source: Metropolitan Nashville Public Schools, *Department of Research, Assessment and Evaluation, April 2014.*

Note: Schools with elementary and middle or middle and high, or elementary-middle-high were not included in the analysis.

\*Data for 2013-2014 is up to January 31, 2014.

While the gifted program has addressed several of the audit recommendations, it has only partially addressed the issue of under-identification of gifted students who are members of historically under-represented student populations. To cultivate students with a potential for giftedness, the School System first implemented the Building Excellent Thinkers (BET) program for under-represented student populations in Title 1 schools. However, the program was stopped because it lacked structure and was sporadically implemented. It will be replaced in 2014-2015 with the Young Scholars of Nashville program in 15 elementary schools with low numbers of students identified for Encore and high numbers of minority students and students on free and reduced-lunch. The purpose of the Young Scholars of Nashville program is to identify and nurture the academic talents and gifts of high performing students in grades K-2 from historically underrepresented populations who do not qualify for Encore to help prepare them to qualify for gifted services.

However, the Encore program has not expanded or replaced its identification and assessment tools to include nonverbal and “culture fair” or “culture free” assessments proved to be effective in identifying minority students and English Language Learners who are gifted. Nonverbal tests of general ability are designed specifically to measure intelligence independently of language and math skills. Assessments

such as the Naglieri Nonverbal Ability Test and the Ravens Progressive Matrices can be used together with more traditional tests to identify a wider range of students who are gifted. The Naglieri Nonverbal Ability Test, for example, measures intelligence in a way that identifies more minority children as well as English Language Learners than traditional tests. The test was administered to children in the Fairfax County Public Schools in Fairfax, Virginia, a district with 160,000 students, resulting in the identification of more gifted minority children who are bilingual than would have been considered for their gifted program if only their verbal and quantitative scores had been used.

### **RECOMMENDATION 2-D.1**

#### **Increase the ethnic and language diversity of the Encore program by including assessments that are effective in the identification of gifted students from under-represented populations.**

The School System's Encore program should identify assessments that have been proved effective in identifying gifted minority students and English Language Learners and incorporate these assessments in the identification process.

The gifted program coordinator should perform the following:

- review and select one or more assessments proved effective in identifying gifted minority students and English Language Learners;
- develop a plan on test rollout and administration determining the number of schools, grade levels, and students to be tested;
- train Encore teachers in administering the test and interpreting test results and administer the assessments in combination with those currently being used;
- publicize the use of the assessments and encourage nominations from parents of minority students and English Language Learners; and
- track changes in the composition of the gifted population, documenting any increases in the number and performance of students from under-represented populations.

The assessment can be rolled out in phases by grade level. For example, during the first year, the assessment can be administered in Kindergarten and Grade 1, in the second year in Grades 2 and 3, and in the third year in Grades 4, 5, and 6. In following years, the School System will assess new English Language Learners in Kindergarten through Grade 6. The School System also has to determine whether all English Language Learners in the respective grades should be tested or only those who are nominated by their teachers and parents.

### **FISCAL IMPACT**

Costs associated with the purchasing of the assessment materials vary by the assessment the School System will select. For example, Nagliari Nonverbal Ability Test materials to be purchased include the following:

- consumable/machine scorable test packs (consisting 10 tests) for students in Grades K-1 (levels A-B);

- reusable test packs (consisting of 10 tests) for students in Grades 2 to 6 (levels C-E);
- answer documents (pack of 30) associated with the reusable test packs;
- directions for administering the test (1 per administrator); and
- hand scoring guides for each level.

The most conservative assumption is that all English Language Learners in Kindergarten through Grade 6 will be tested. The School System will incur the following material purchasing costs based on January 2014 English Language Learners enrollment data:

The School System has 1,836 Kindergarten and 1,356 Grade 1 English Language Learners, or a total of 3,192 English Language Learners. The School System will purchase 319 test packs @\$56.00/pack, totaling \$17,864; assume the purchase of 50 directions for administrators @\$20 each, totaling \$1,000; and assume 50 hand scoring guides @\$85.00, totaling \$4,250. Estimated costs for test materials for Kindergarten and Grade 1 are \$23,114.

The School System has 900 English Language Learners in Grade 2 and 639 in Grade 3 for a total of 1,539. The School System will purchase 154 reusable test packs @\$46.00/pack, totaling \$7,084; 52 packs of answer documents (pack of 30) that are required with reusable test packs costing \$50.00/pack totaling \$2,600; assume 30 directions for administrators @\$20 each, totaling \$600; and assume 30 hand scoring guides @\$85.00, totaling \$2,550. Estimated costs for test materials for Grades 2 and 3 are \$12,834.

The School System has 663 English Language Learners in Grade 4, 478 in Grade 5, and 424 in Grade 6 for a total of 1,565. The School System will purchase 156 reusable test packs @\$46.00/pack, totaling \$7,176; 52 packs of answer documents (pack of 30) that are required with reusable test packs costing \$50.00/pack totaling \$2,600; assume 30 directions for administrators @\$20 each, totaling \$600; and assume 30 hand scoring guides @\$85.00, totaling \$2,550. Estimated costs for test materials for Grades 4, 5, and 6 are \$12,926.

Following the three-year rollout, the School System will test only new students as they enroll. Assuming that the English Language Learners population will grow at five percent a year, test materials will only have to be purchased for students in Kindergarten and Grade 1 as the test materials for all other grades are reusable. Only consumable test packs will have to be purchased as test administrators will have the directions and the hand scoring guides. At the assumed growth level, the School System will enroll 160 new English Language Learners in Kindergarten and Grade 1 per year. Estimated costs include 16 test packs @\$56.00/pack totaling \$896.

As the materials include directions for administering the test and a hand scoring guide, any additional training of Encore teachers can be incorporated into the annual professional development of these teachers.

## **SPECIAL EDUCATION INTERVENTION PROCESS**

### **OBSERVATION 2-E**

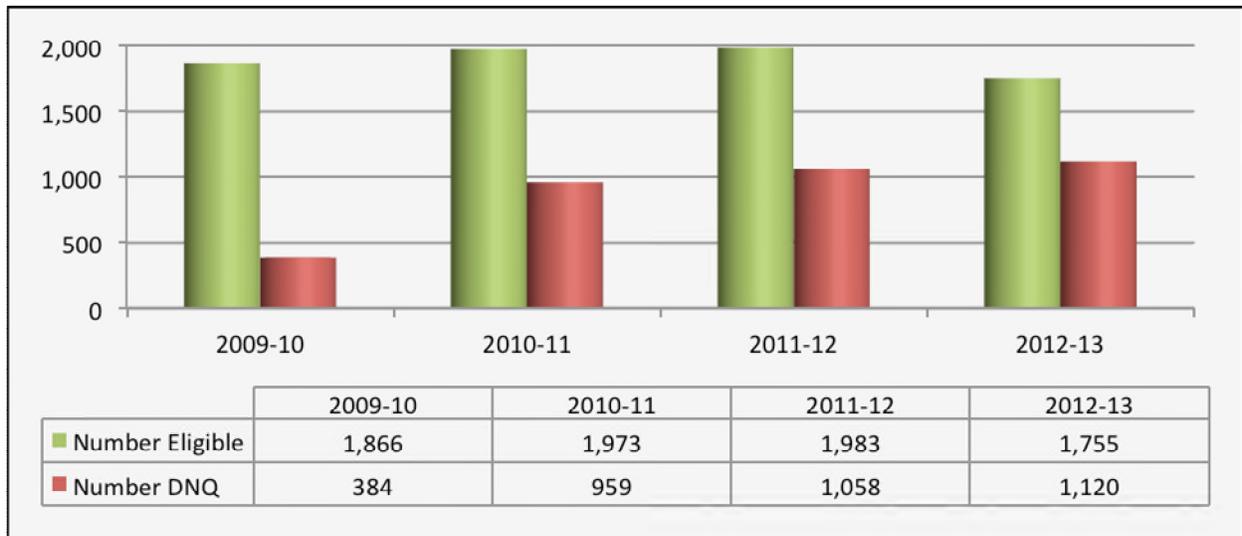
**The intervention process used by the School System to assist students with academic, behavioral, social-emotional, or health issues has resulted in a high percentage of referrals for special education services that do not qualify.**

The School System uses a multi-step, highly-structured and documented process to refer students with academic, behavioral, social-emotional, or health issues to a school-based support team composed of teachers, other professional staff, parents, and agency representatives. Coordination is provided by a central office coordinator.

Before a student can be referred to a support team, the teacher is required to conduct a teacher-parent conference to discuss the challenges the student is facing and the interventions the teacher is proposing. If the interventions prove ineffective, the teacher convenes a conference with the parent and all teachers serving the student for the purpose of developing additional interventions. If these interventions are not effective in addressing the identified concerns, the teacher submits a referral to the support team chair with all documentation. The teacher completes, within 10 days, the additional information and provides the records the support team chair requested on the student. A support team meeting is scheduled with the teacher and parent within 10 days after all required documentation has been provided. Based on the documentation, the support team determines the appropriate types of interventions and develops an implementation plan for the student in conjunction with the parent, principal or designee, general and exceptional education teachers, a school counselor, an assessment specialist, and the student. The implementation plan specifies the accommodations and interventions to be implemented, identifies the person(s) responsible, and describes expected progress and outcomes at predetermined dates. The team assigns one of its members as a monitor to ensure that the intervention plan is implemented with fidelity. All support team meetings are documented and progress is tracked. While the primary purpose of the support team process is to identify resources and support a student may need to succeed in school, if the interventions are not effective or if a disability is suspected, this process is also used as a referral source for a comprehensive evaluation for a disability and, as pertinent, for special education services.

Although the support team process the School System uses is highly-structured to ensure consistency in implementation, it has resulted in a high percentage of referrals that do not qualify for special education services. Between 2009-2010 and 2012-2013, the number of referrals to special education increased 27.7 percent while non-qualifying referrals as a percent of total referrals more than doubled from 17.1 percent in 2009-2010 to 39.0 percent in 2012-2013 as shown in **Exhibit 2-40**.

**Exhibit 2-40  
Number and Percentage of Referrals to Special Education  
2009-2010 through 2012-2013**



Source: Metropolitan Nashville Public Schools, Office of Exceptional Education, February 2014.

School districts often use data on the outcomes of the support team’s referral process as an indicator of the fidelity of process implementation. The School System has not evaluated the support team’s referral process nor conducted any analyses of non-qualifying referrals. While the evaluation of its special education services commissioned by the School System in 2012 focused on inclusion and services to special education students, it did not address the referral processes, of which support team referrals are one source. While no school was identified as having a disproportionate number of referrals to special education or a large number of referrals that did not qualify, there is a lack of information on whether referrals that did not qualify are associated with specific suspected disabilities. In addition, there is no information on any other factors contributing to the increased number of referrals that do not qualify, such as, quality of monitoring the implementation of the intervention plan, teacher’s differentiated instruction, or the intensity, frequency, and duration of the interventions. As the evaluation of students for special education is a resource intensive and costly process, reducing the number of referrals that do not qualify will be economically advantageous.

**RECOMMENDATION 2-E.1.**

**Evaluate the intervention process to identify factors contributing to the large number of non-qualifying referrals for special education services.**

The Executive Director of the Office of Exceptional Education should do these things:

- Analyze the data contained in the support team’s referral folders to identify the factors that differentiate between qualifying and non-qualifying referrals. Use the results of the analysis to review the referral process and determine what changes should be introduced to reduce the number of ineligible referrals and incorporate the changes into the referral process.

- Provide training for the support teams and other appropriate staff regarding any changes to be made to the referral process.
- Track all non-qualifying referrals and use the findings to refine the process.

### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

## **GUIDANCE AND COUNSELING SERVICES**

### **OBSERVATION 2-F**

**The scope and quality of services provided by the School System’s Guidance and Counseling program is affected by the extent to which non-counseling responsibilities are assigned to the counselors.**

The American School Counselor Association’s National Model recommends that counselors spend 80 percent or more of their time in direct and indirect services to students. Direct student services are defined as in-person interactions between school counselors and students and include the school counseling core curriculum that is designed to help students acquire the knowledge, attitudes, and skills appropriate for their development level; assist students to establish personal goals and develop future plans; and provide responsive services to meet student needs in individual or small group sessions. Indirect services are provided on behalf of the students as a result of counselor interactions with others, such as referral for additional assistance and consultation and collaboration with parents, teachers, and community organizations. In specifying the school counselor’s responsibilities, the American School Counselor Association National Model emphasizes that school counselors “cannot be fully effective when they are taken away from essential counseling tasks to perform non-counseling activities.” Inappropriate non-counseling activities the American School Counselor Association National Model lists include the following:

- registering, scheduling, and coordinating paperwork and data entry for all new students.
- administering/coordinating cognitive, aptitude, and achievement tests;
- signing excuses for tardy or absent students;
- performing disciplinary actions;
- sending home students who are not appropriately dressed;
- reaching classes when teachers are absent;
- computing grade point averages;
- maintaining student records;
- supervising classrooms, study halls, or common areas;
- keeping records;
- assisting with duties in the principal’s office;
- working with one student at a time in a therapeutic clinical mode; and

- coordinating school-wide individual education plans, study teams, and school attendance review boards.

Utilizing counselors to perform these non-counseling tasks takes them away from “what they do best and what only they can do.”

While the School System’s Guidance and Counseling program does not have individual counselor data on the time spent on direct and indirect counseling activities and on non-counseling activities, the amount of time counselors are assigned to perform non-counseling duties has the most significant effect on the services counselors provide to students. The amount of time counselors are asked to devote to the performance of non-counseling duties is considered the greatest barrier to providing high quality interventions for students. Even in schools where counselors have smaller caseloads, they do not spend more time helping students than do counselors with larger caseloads because they are being asked to perform a large amount of clerical and administrative tasks. The School System’s non-counselor duties include testing coordination and administration, coordinating support teams, administering the Response to Intervention program, paperwork, and scheduling.

#### **RECOMMENDATION 2-F.1**

**Conduct a time and task analysis of direct services, indirect services, and non-counseling services being provided by counselors to determine how their time is being allocated.**

The School System’s Guidance and Counseling executive director should perform a detailed analysis of the time counselors spend in direct counseling services, indirect services, and non-counseling activities. The analysis should examine the data by service or activity, caseload, school level, and selected school characteristics such as number and type of discipline problems and discipline consequences, number of students on free or reduced lunch, and attendance rates. The Guidance and Counseling executive director should develop and implement a time-activity data collection system in which each counselor records the time he/she spends daily on listed activities. Data should be recorded for the entire school year as time allocated to specific activities fluctuates throughout the year. The Guidance and Counseling program executive director should train all counselors in the use of the time-activity system and monitor data monthly.

In addition to overall data on all counselors, the analysis will pinpoint time spent on respective non-counseling activities. The analysis should also identify variations in time/activity across school levels, school sizes, and school characteristics. These data can assist the Guidance and Counseling program in refining its job descriptions, negotiating with the School System’s administration on assignment of counselors to non-counseling activities both in terms of time and type of activity, realigning the program more closely with the American School Counselor Association model, and refining its counselor evaluation system to account for time utilization in direct and indirect services.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

## **ACCESS TO HEALTH SERVICES**

### **OBSERVATION 2-G**

**Current nurse staffing levels in the School System allow it to offer a minimal health services program, leaving a large number of schools without appropriate access to services provided by a school nurse.**

The School System's Student Health Services program has a staff of 70 including a director, five supervisors, and 64 nurses that serve its 154 schools as well as two schools that are not in the School System but have the School System's students with health needs as illustrated in **Exhibit 2-41**. All the nurses are Registered Nurses. The School System contracts with the Metropolitan Public Health Department in Nashville and with the Vanderbilt School of Nursing for nurses. One hundred and two or 65.4 percent of the schools have daily scheduled nursing services; however, in 54 or 34.6 percent of the schools nurses visit only to answer questions from school staff or oversee medication delivery.

**Exhibit 2-41  
Schools and Nursing Services – 2013-2014**

	<b>Number</b>	<b>Percent</b>
Total Number of Schools	156*	100.0%
Schools with Daily Scheduled Nursing Services	102**	65.4%
Contact Schools	54	34.6%
Non-Metropolitan Nashville Public Schools with the School System's Students Served by the School System's Nurses	2	1.3%
Schools Served Daily by More than One Nurse	8	5.1%
Schools Served by State Department of Health Nurses	153	98.1%
Schools Served by Nurses from the Vanderbilt School of Nursing	3	1.9%

*Source: Metropolitan Nashville Public Schools, Office of Chief Support Services Officer, February 2014.*

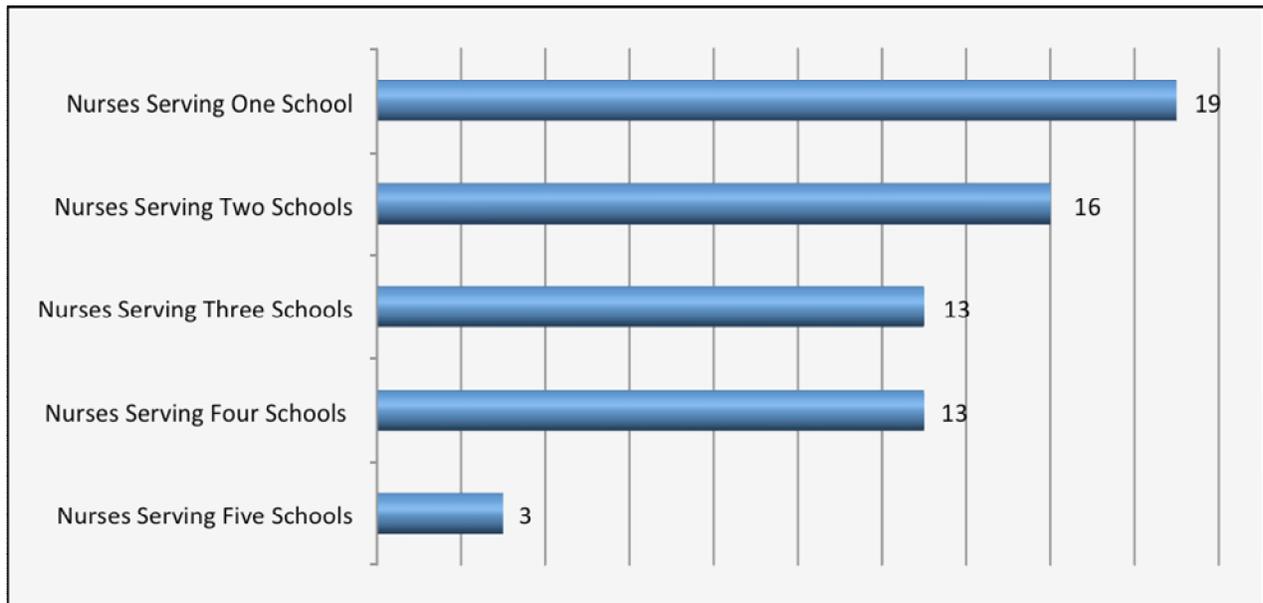
*\*Number of schools includes two non-Metropolitan Nashville Public Schools with Metropolitan Nashville Public Schools students who need nursing services.*

While the School System exceeds the Basic Education Program formula of funding one nurse per 3,000 students or 28.3 nurses for a system the size of the Metropolitan Nashville Public School, the program it offers is considered minimal. A minimal program consists of direct skilled nursing services and the development of Individual Health Plans for students with acute or chronic conditions such as asthma, diabetes, severe allergies, sickle cell, and seizure disorders. The School System has more than 5,000 students with chronic medical conditions that require individual health plans and 92 schools with students requiring daily medical procedures.

The demand for school nursing services has grown nationally. The increase in the number of students with complex and chronic medical conditions, estimated to affect 15 to 18 percent of all students, the lack of health insurance for 9.7 percent of children, and the lack of family access to medical services have resulted in the schools becoming the main source of health care for many students and their families.

Nurses visit between one and five schools daily and may make as many as five or six trips a day between and among schools with multiple trips to a given school depending on students' medical needs. Of the 64 nurses making school visits, 70.3 percent visit two or more schools a day as shown in **Exhibit 2-42**.

**Exhibit 2-42**  
**Nurse Distribution – 2013-2014**



Source: Metropolitan Nashville Public Schools, Office of Chief Support Services Officer, February 2014 and School Health Services Program, April 25, 2014.

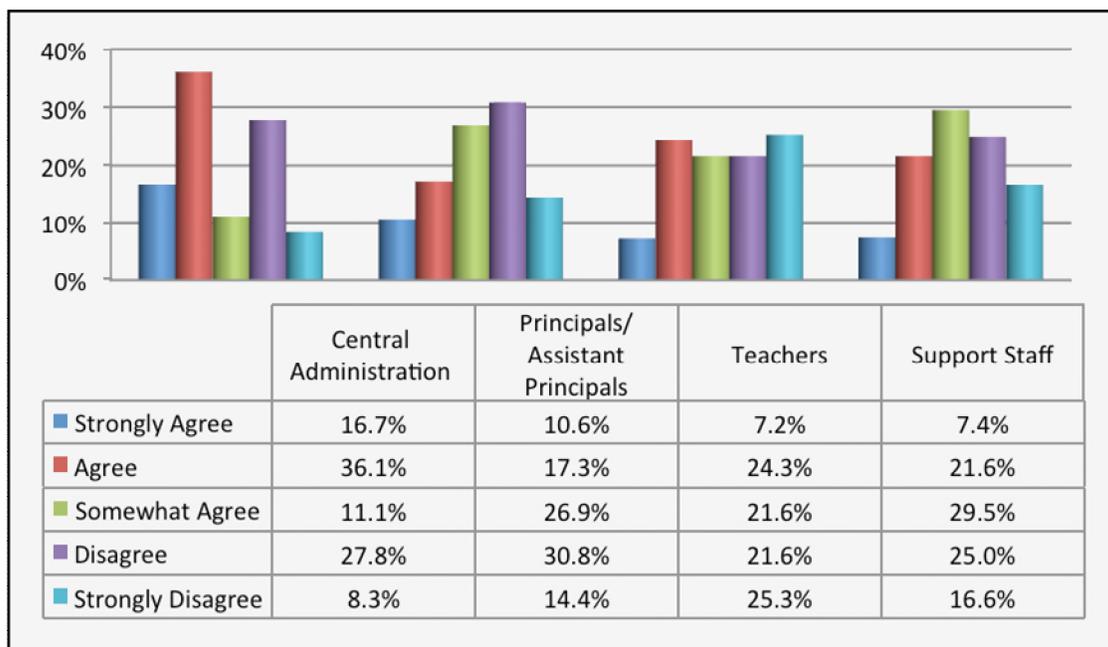
The impact of using nurses in this manner results in the following issuer:

- lack of a fulltime campus presence shifts tasks that nurses typically perform to school personnel such as principals, teachers, secretaries, and aides, taking away time from their normal responsibilities;
- functions such as first aid and dispensation of medications usually performed by nurses cannot be done as efficiently or with the same quality and completeness by school staff; and
- multiple campus assignments and part-time availability minimize the time that nurses can dedicate to:
  - participating on Individualized education plan (IEP) and 504 teams for students with health issues;
  - maintaining students' health records, especially those related to immunizations, and conducting bi-annual competency assessments of students who perform their own invasive procedures in school;
  - developing electronic medical records for the students, verifying doctors' orders, and performing monthly self-assisted medication audits in all schools;

- following up with medical providers and parents whose children have certain medical conditions or need further medical evaluations;
  - educating teachers and staff about specific students’ health conditions and emergency plans;
  - Engaging in small group or classroom presentations to deliver health education and promote hygiene, healthy eating, and healthy habits;
  - meeting the need for parent health education;
  - acting as first responders in case of a medical emergency; and
  - serving on school emergency response teams or implementing training and drills in preparation for emergencies.
- under-utilization of the Health Office, a system for logging medications and nursing services. For example, due to lack of time on the part of nurses and school staff, student immunization data is not entered into the system. As a result, schools have to maintain paper certificates that are stored with students’ educational records.

The perception among staff is that access to school nurses is limited as shown in **Exhibit 2-43**. Only 28 to 32 percent of principals and assistant principals, teachers, and support staff that responded to a survey regarding educational service delivery agreed or strongly agreed that students have access to a school nurse when needed. Approximately 53 percent of those in central administration responded similarly.

**Exhibit 2-43**  
**Students Have Access When Needed to a School Nurse\***



Source: Survey of Metropolitan Nashville Public Schools, April-May 2014.

\*Percentages were recalculated excluding respondents who checked “not applicable.”

Research indicates that not having access to a school nurse or assigning non-nursing school personnel to perform nursing tasks is detrimental to maintaining an effective student health program while having nurses on campuses full-time has multiple benefits associated with student attendance and subsequently with academic achievement and graduation rates. Some of the research findings include the following:

- a 2011 study showed that having a full-time nurse on campus saves a considerable amount of time, estimated at up to 13 hours a day, for principals, teachers, and clerical staff assigned to performing health-related tasks;
- studies conducted in 2005 and 2008 showed that nurses are significantly less likely to dismiss a student from school early than non-licensed personnel; and
- a 2005 study demonstrated that school nurses have a positive impact on immunization rates with fewer parents asking for exemptions and fewer students missing school.

In addition, multiple studies have demonstrated that a lower nurse-to-students ratio is associated with better attendance rates. These studies are supported by the School System's data showing that when a student visits a nurse the overall return-to-class rate is 69 percent. However, in schools with a full-time nurse the rate is higher, ranging from 73 to 89 percent.

The School System has a considerably higher nurse-to-students ratio compared with other Tennessee counties. . A June 2012 survey showed the School System's nurse-to-student ratio to be 1:1,513 compared with ratios ranging from 1:600 to 1:950 in five Tennessee counties as shown in **Exhibit 2-44**. Even with an increase in 2013-2014 in the number of nurses, the nurse-to-students ratio was only lowered to 1:1,275 compared to the recommendation of the National Association of School Nurses of 1:750 for the general student population.

**Exhibit 2-44**  
**Nurse-to-Students Ratio in Metropolitan Nashville Public Schools and Other Counties – 2012**

School District/ System	Metropolitan Nashville Public Schools	Hamilton	Rutherford	Williamson	Wilson	Shelby
Number of Schools	134*	77	45	40	18	51
Number of Students	81,712	42,000	39,900	33,000	16,000	47,500
Number of Nurses**	54	70	42	39	18	51
Nurse-to-Students Ratio	1:1,513	1:600	1:950	1:846	1:889	1:931

Source: Metropolitan Nashville Public Schools, Student Health Service Program, April 23, 2014.

\*Does not include charter schools but includes two Exceptional Education non-Metropolitan Nashville Public Schools.

\*\* Does not include supervisory positions.

\*\*\* Memphis did not respond to the survey.

Polk County, a peer district, had 97,902 students in 2013-2014 and 127 nurses for a 1:771 nurse-to-students ratio. The School System with a population of 82,863 students and 64 nurses has a ratio of 1:1,295. The nurse-to-students ratio is 68 percent higher than Polk County's ratio.

#### **RECOMMENDATION 2-G.1.**

##### **Conduct an operational review of the Students Health Services program to address staffing levels, nurse-to-student ratios, and the allocation of nurses across campuses.**

The coordinator of the Students Health Services program should conduct an operational review of the program, jointly with representatives of the Human Capital and the Information Management and Decision Support Departments to determine how the assignment and utilization of nurses can be optimized at different staffing and skill levels.

As part of the program operational overview, the coordinator of Students Health Services should do an analysis of the distribution of students with chronic health conditions who require daily nursing care and classify schools into different categories based on the number of students requiring such care. The coordinator should explore a range of service and staffing options for schools with a very small number of such students and identify the most efficient option.

Currently, the assignment of nurses to schools changes often as the health care needs of a school may change with the presence of a new student with a chronic health condition. Having a highly mobile student population requires frequent scheduling changes in assigning nurses to schools. The operational review should examine alternatives for addressing changes in nurse allocations throughout the year as the health care needs of a school may change due to students with chronic health conditions moving to different schools.

The operational review should also examine the extent and effectiveness with which technology is used in the program and determine whether additional aspects of the program, such as individual health plans, can be automated. Following automation, the efficiency of the programs used should be tracked.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

## **ENGLISH LANGUAGE LEARNER PERFORMANCE CHALLENGES**

### **OBSERVATION 2-H**

**While the School System has made improvements in its English Language Learners program, its program is still facing instructional and student performance challenges.**

The School System has a large student population whose English language proficiency is classified as either no English language background or limited English proficiency (LEP). It has students from 120 countries speaking as many different languages and dialects. In 2013-2014, 22,092 students or 26.7 percent of the total student population had no English language background. From 2009-2010 through February 2014, the percentage of students with no English language background grew 38.1 percent. Over the same period, the percentage of students with limited English proficiency increased 22.2 percent, and those designated as English Language Learners increased 29.2 percent. The total student population increased 16.3 percent over the same period as shown in **Exhibit 2-45**.

#### **Exhibit 2-45**

#### **Number and Percentage of Metropolitan Nashville Public Schools Students with No English Language Background, Limited English Proficiency and English Language Learners – 2009-2010 to 2013-2014\*\***

<b>Year</b>	<b>Total Number of Students*</b>	<b>Number of Students in Program</b>	<b>Annual Change in Number of Students in Program</b>	<b>Percent of Total Number of Students in System</b>
<b>No English Language Background</b>				
2009-2010	71,228	15,994		22.5%
2010-2011	72,449	16,339	2.2%	22.6%
2011-2012	74,563	18,578	13.7%	24.9%
2012-2013	76,551	20,468	10.2%	26.7%
2013-2014	82,863	22,092	7.9%	26.7%
<b>Limited English Proficiency</b>				
2009-2010	71,228	10,166		14.3%
2010-2011	72,449	10,763	5.9%	14.9%
2011-2012	74,563	11,205	4.1%	15.0%
2012-2013	76,551	11,861	10.2%	15.5%
2013-2014	82,863	12,420	4.7%	15.0%
<b>English Language Learners</b>				
2009-2010	71,228	8,089		11.4%
2010-2011	72,449	8,385	3.7%	11.6%
2011-2012	74,563	8,751	4.4%	11.7%
2012-2013	76,551	9,286	6.1%	12.1%
2013-2014	82,863	10,448	12.5%	12.6%

Source: Metropolitan Nashville Public Schools, Office of English Learners, February 2014.

\*Total number of students in 2009-2010 to 2012-2013 is based on Membership; total number of students in 2013-2014 is Enrollment.

\*\*Data for 2013-2014 is up to January 31, 2014.

The School System has a mixed track record with regard to meeting the Tennessee English Language Program Accountability Standards under Title III of the Elementary and Secondary Education Act. The three accountability standards, called the Annual Measurable Annual Objectives, are:

- Annual Measurable Annual Objective 1: the percent of limited English proficient students who show progress on the state language proficiency exam. (The School System met the target in 2009-2010 and 2010-2011 but not in 2011-2012 and 2012-2013.)
- Annual Measurable Annual Objective 2: the percent of limited English proficient students who exited Limited English Proficiency (LEP) status and the English Learners program by meeting the exit criteria on the state language proficiency exam. (The School System met the target in 2009-2010, 2010-2011 and 2011-2012- but not in 2012-2013.)
- Annual Measurable Annual Objective 3: whether the district met accountability standards for the Limited English Proficiency subgroup based on results from the Tennessee Comprehensive Assessment Program and End Of Course exams. (The School System met the standard in 2011-2012 but not in 2009-2010, 2010-2011 and 2012-2013.)

The last year in which the School System met all three Annual Measurable Annual Objectives was 2008-09. In 2012-2013, it failed to meet all three Annual Measurable Annual Objectives. Its performance on the Annual Measurable Annual Objectives 1 and 2 was the second lowest among all districts funded under Title III in 2011-2012 and was lower in 2012-2013 than it was in 2009-2010.

The English Language Learners program was externally evaluated in 2010 to determine whether and how effectively the School System implemented its agreement with the Office of Civil Rights regarding the instruction and integration of students with limited English proficiency. Previously, the School System placed students with limited English proficiency in self-contained classrooms for four years. Under a compliance agreement with the Office of Civil Rights, the School System was authorized to implement a program that would not segregate limited proficiency students for the entire school day and that these students “would not remain in segregated structured immersion classes for more than one school year in most cases and no more than two school years ever.” The School System also agreed to provide the necessary language support to students transitioning to general education to help them attain academic proficiency.

The 2010 evaluation was based on a framework the evaluators developed to guide schools and districts in assessing their programs for English Language Learners and promote program excellence through high expectations, development of full English proficiency, the teaching of challenging core content, providing appropriate instruction, using valid assessments, and sharing responsibility with the general education program. According to this framework an effective English Language Learners program is characterized as “enriched, academically challenging, long-term, and integrated with programs for native English speakers.”

The purpose of the evaluation was to examine the extent to which these principles were in place and to provide guidance to ensure the School System is implementing an effective program for English Language Learners. It concluded that while progress had been made from 2006 to 2009, it had not met all of its goals for its English Language Learners. Although systems of support had been established, improvement was needed in all categories related to effective practice. The greatest need was associated with the implementation of high academic standards for English Language Learners. The evaluation contained three key recommendations:

- transform the School System’s English Language Learner program from a segregated, remedial approach to an integrated, enriched approach to educating students;
- ensure that all teachers of English Language Learners are prepared to support high academic achievement for these students; and
- hold all school personnel accountable for improving teaching and learning for English Language Learners.

Since the report was issued, the English Language Learners program has gone through considerable changes related to the structure, curriculum, staffing allocation guidelines, professional development, and monitoring strategies as outlined in **Exhibit 2-46**.

#### Exhibit 2-46

#### Office of English Language Learners Implementation of Recommendations in the 2010 Appraisal of the English Language Learner Program

Recommendation	Actions Taken*
<p><b>Transform the School System’s English Language Learner program from a segregated, remedial approach to an integrated, enriched approach to educating students.</b></p> <p>The School System has moved to fully integrate English Language Learners into general education classes. The School System, in 2013-2014, implemented a structured immersion program to meet English Language Learner needs at different proficiency levels.</p>	
<p>Break down district silos so that English Language Learners are a shared responsibility of all district leaders and offices.</p>	<p>Office of English Learners executives and staff participate in system initiatives, committees, and work with other departments and offices.</p>
<p>Involve all stakeholders in setting English Language Learners program goals.</p>	<p>In process: Office of English Learners has begun to set up community meetings and English Language Development teacher and principal committees, and jointly with other departments form an Executive Council to work on English Learner procedures.</p>
<p>Articulate a vision and goals based on an enriched approach to educating all students.</p>	<p>Established, in November 2013, a structured immersion program to meet English Language Learner needs at different proficiency levels. The State approved the plan. Made presentations to system leaders and principals in December 2013 about the program. Provides Sheltered Instruction Observation Protocol training, coaching, and mentoring for general education teachers.</p>
<p>Require that specific goals for English Language Learners are included in school improvement plans.</p>	<p>Each school using the Sheltered Instruction Observation Protocol has an implementation plan. Some schools included the plan in their school improvement plan.</p>
<p>Improve the English Language Learners curriculum to support high expectations for language development as well as cognitive and academic growth.</p>	<p>The English Language Development curriculum team aligned the state English Language Development standards to Common Core English Language Arts standards. The team created a teacher report to communicate the language progress of English Learners.</p>

**Exhibit 2-46**

**Office of English Language Learners Implementation of Recommendations in the 2010 Appraisal of the English Language Learner Program (Cont'd)**

Recommendation	Actions Taken*
Ensure the sheltered instructional approach is inclusive of all the components of effective practice supported by research	The Sheltered Instruction Observation Protocol the program uses has a strong empirical research base showing that it can improve the academic literacy of English Learners.
Support the full integration of English Language Learners in all academic and extra-curricular programs.	Since November 2013, English as Second Language services are provided across all school levels tailored to the students' proficiency level in accordance with state program policy. Services are provided through four service delivery models, based on the number of English learners in a school and the students' proficiency levels.
Provide appropriate resources, materials, and guidance to support grade-level content instruction.	The Office of English Learners is creating an advisory committee to help provide appropriate resources, materials, and guidance. It has also offered lesson plan formats to help teachers differentiate. At the school level, teachers of English Language Learners and general education teachers meet to discuss resources and materials to support grade-level instruction.
Establish appropriate policies and procedures for identifying English Language Learners with special needs.	The Office of English Learners has revised its policies and procedures for identifying, referring, and assessing students with disabilities who are English Learners. It is also planning in 2014-2015 to use different assessments to identify English Learners who are gifted and talented for the Encore and the Young Scholars of Nashville programs.
Ensure current and former English Language Learners have access to honors, advanced placement, and the necessary coursework that prepares them for college and the workplace.	The School System is considering offering advanced placement courses in other languages.
<b>Ensure that all teachers of English Language Learners are prepared to support high academic achievement for these students</b>	
Hire sufficient numbers of content teachers qualified to serve English Language Learners.	The School System has 745 teachers who are English as a Second Language certified. The English Learners Office has trained more than 1,830 teachers in Sheltered Instruction Observation Protocol strategies. Using Race to the Top funds in 2011 through 2013-2014, the Office enrolled 352 teachers in Lipscomb University to obtain an English as a Second Language endorsement. It also provided professional development to 136 secondary teachers in preparation for the English as a Second Language portion of the Praxis.
Review the formula for determining class size.	The English Language Development Curriculum team developed staffing formulas for English Learners for all school levels.

**Exhibit 2-46**

**Office of English Language Learners Implementation of Recommendations in the 2010 Appraisal of the English Language Learner Program (Cont'd)**

Recommendation	Actions Taken*
In schools with significant numbers of English Language Learners, require all teachers to obtain an English as a Second Language endorsement.	Using Race to the Top funds, the School System partnered with Lipscomb University and Belmont University to offer English as a Second Language endorsement courses at no cost to teachers.
Require all teachers of English Language Learners to participate in school- and/or district-based professional development.	Information on professional development on English Learners' issues is input into the School System's professional development system. The Office of English Learners also tracks attendance in all English Learners professional development in schools and systemwide. Schools participating in Sheltered Instruction Observation Protocol receive professional development and follow-up support either on campus or systemwide.
Prepare all teachers to implement a challenging and academically enriched approach to instruction for English Language Learners.	The English Language Development coaches reinforce the importance of teaching grade level content while providing language instruction through the Sheltered Instruction Observation Protocol. It provides a framework for language instruction while teaching the content for lesson planning and for the delivery of effective English Learners instruction.
Provide school-based coaching and mentoring.	The School System employed eight English Language Development coaches in August 2011 to support teachers who have English Learners through professional development and assist with program implementation. Each of the coaches was assigned to two clusters and to 10-15 schools within a cluster. In 2014 the coaches were reassigned to schools with the highest English Learners population working with the English Language Development Curriculum director, coordinators and specialists.
Support the formation of collaborative professional learning communities at school and district levels.	Multiple collaborative efforts are implemented from co-teaching to team and cross-department meetings of teachers and coaches. For example, the Sheltered Instruction Observation Protocol team meets with grade level teams during common planning time to implement the protocol's instructional components. In monthly meetings, English Learner representatives from different schools share information and complete book studies. English Learner coaches and data coaches collaborate in reviewing student work and data, identify areas for improvement, and plan next steps.
<b>Hold all district and school personnel accountable for improving teaching and learning for English Language Learners.</b>	
Improve the system for using data to inform English Language Learners instruction.	The Data Warehouse integrated data on English Learners so that teachers can access the data to review progress. The Data Warehouse plans to include data on prior schooling by 2015.

**Exhibit 2-46**

**Office of English Language Learners Implementation of Recommendations in the 2010 Appraisal of the English Language Learner Program (Cont'd)**

Recommendation	Actions Taken*
Train district leaders, school administrators, and teachers how to use the system to access English Language Learners data and to analyze these data to improve instructional programs.	Collaboration with the Federal Programs Office began in December 2013. The Federal Programs Office trained schools on using the data system to access English Language Learners data.
Prepare school administrators with the training and tools to understand effective instructional programs for English Language Learners.	The Office aligned the Walk-Through for principals with the latest standards. A new web site is being created to make information on the program more easily available. The Office will offer webinars and blackboard courses. Each principal will receive a guide on the program. At the elementary level, the Office started to create collaborative cohorts of principals for information sharing and professional development regarding the English Learner program.
Monitor instruction and learning in all classrooms that have English Language Learners.	Coaches monitor instruction and English Learner strategies in schools with a large number of English Learners. In 2013-2014, principals received a special Walk-Through form with a check list of strategies for observation. The Office also worked with the Data Warehouse to add reports that meet teacher needs.
Create a system for ongoing evaluation and improvement of the English Language Learners program.	There is no annual program evaluation in place. The Office plans to develop an evaluation system with the Executive Council.

Source: Metropolitan Nashville Public Schools, Office of English Learners, Response to the 2010 Appraisal of the English Language Learner Program in the Metropolitan Nashville Public Schools Conclusions and Recommendation, April 9, 2014.

\*The Implementation column highlights the main implementation activities.

As the rates of proficiency, program completion, and performance on state tests have not improved, the School System plans an evaluation in 2014 to determine the extent to which and how well the recommendations of the 2010 study have been implemented, the impact of program changes on student performance, and the effectiveness of the current program practices at the classroom, school, and systemwide levels.

**RECOMMENDATION 2-H.1.**

**Implement the 2014 program evaluation, identifying areas where improvement is needed and develop an implementation and evaluation plan.**

The 2014 evaluation should determine the fidelity and effectiveness with which program changes have been implemented, the preparedness and qualifications of the English Language Development and general education teachers, the rigor and quality of how both language and content instruction is being delivered, and the effectiveness of the monitoring process.

Based on the evaluation results, the Office of English Learners executive director, director of English Language Development Curriculum, and the English Language Development coordinators should do the following:

- prepare an operational program improvement plan, specifying what changes or improvements need to be made, steps and strategies for implementing the changes, person(s) responsible, resources needed/allocated, timeline, and expected outcomes;
- develop a monitoring process aligned with the program improvement plan consisting of monitoring tools and reports;
- conduct annual evaluations to assess students' language proficiency progress, program completion rates, and performance on state tests; and
- update the operational improvement plan and the monitoring process, as needed, based on the annual evaluation results.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

## **LIBRARY/MEDIA COLLECTION**

### **OBSERVATION 2-I**

**Seventy-five percent of the School System’s high school libraries do not meet the state collection size standard.**

Tennessee’s minimum requirement for public school library collection is an “average of at least 12 items per student in average daily membership.” The library collections of 12 of the 16 high schools do not meet this standard. The number of items per student ranges from 8.82 at Antioch High School to 20.48 items per student at Pearl-Cohn High Magnet. Seven of the high school libraries have fewer than 10 items per student, as shown in **Exhibit 2-47**. One factor accounting for the small collections is libraries’ space limits. Seven of the high school libraries, according to the lead librarian, do not have the physical space to expand their collections.

To increase their library offerings, the School System’s middle and high schools participate in Limitless Libraries in partnership with the Nashville Public Library. The School System can only include the items that Limitless Libraries specifically purchased for the schools using the set amount of \$7,000 per school in their ‘items per student’ calculation. The ‘items per student’ data presented in **Exhibit 2-47** includes these items; however, the School System cannot include any other Limitless libraries items in their ‘items per student’ calculation due to several reasons. The Nashville Public Library’s policy considers Limitless Libraries a supplemental and not a supplantal program; the items are not on the school site; and the program is not open to all students, only to students who have a Nashville Public Library card and who are in good standing with the public library.

**Exhibit 2-47  
High School Libraries Collection Size and Items per Student**

School	Collection Size	Average Daily Membership	Number of Items per Student	Number of items Needed to Meet Standard
Antioch High	16,978	1,926	8.82	6,134
Cane Ridge High	15,495	1,641	9.44	4,197
East Magnet School (High)	6,507	733	8.88	2,289
Glenclyff High	12,925	1,418	9.11	4,091
Hillsboro High	13,806	1,208	11.43	690
Hillwood High	12,394	1,187	10.44	1,850
Hume-Fogg High Magnet	8,505	928	9.16	2,631
Hunters Lane High	14,389	1,587	9.07	4,665
King High Magnet	12,060	1,198	10.07	2,316
Maplewood High	13,921	836	16.65	0
McGavock High	31,951	2,207	14.48	0
Nashville School of the Arts	6,228	654	9.52	1,620
Overton High	17,563	1,732	10.14	3,221
Pearl-Cohn High Magnet	15,569	760	20.48	0
Stratford High	9,408	619	15.19	0
Whites Creek High	9,048	788	11.48	408
<b>Total</b>	<b>216,747</b>	<b>19,422</b>	<b>11.20</b>	<b>34,102</b>

Source: Metropolitan Nashville Public Schools, Office of Learning Technology and Library Services, May 2014.

Research has shown that a large and up-to-date collection of print and electronic resources, in addition to having certified librarians and aides, incremental increases in funding, and student usage of the library, lead to incremental gains in student learning and performance.

#### **RECOMMENDATION 2-I.1.**

**Increase all high school library collections to 12 items per student to meet the state minimum standard.**

To increase library collections to the minimum state standard of 12 items per student, the high school library collections will have to be supplemented by 34,102 items. At an average 2013 cost of \$20.82 per book, this will require an investment of \$710,004 without factoring any increases in the current cost of books beyond 2014. The School System can increase its high school library collections over a period of five years at a cost of \$142,001 per year. The lead librarian, jointly with the high school librarians, should analyze the current collections with regard to age and subject area and develop a set of priorities reflecting the areas where collections are weak or aged and give priority to libraries with the lowest number of items per student. The lead librarian should develop an annual list of books and other items to be acquired based on the analysis and the priorities developed.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

## FISCAL IMPACT SUMMARY

	RECOMMENDATION	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 3: EDUCATIONAL SERVICE DELIVERY</b>								
<b>2-A.1</b>	Develop a plan for reducing the concentrations of high-poverty populations in existing K-8 magnet schools.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>2-B.1</b>	Identify and implement behavior management strategies that have been proven effective in reducing the need for disciplinary actions for all students and in reducing racial disparities in discipline.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>2-C.1</b>	Implement behavior management strategies that have been proved effective in reducing racial disparities in discipline, especially those associated with placement in disciplinary alternative education settings.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>2-D.1</b>	Increase the ethnic and language diversity of the ENCORE program by including assessments that are effective in the identification of gifted students from underrepresented populations.	(\$23,114)	(\$12,834)	(\$12,926)	(\$896)	(\$896)	(\$50,666)	\$0
<b>2-E.1</b>	Evaluate the intervention process to identify factors contributing to the large number of non-qualifying referrals for special education services.	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**FISCAL IMPACT SUMMARY (Cont'd)**

	RECOMMENDATION	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 3: EDUCATIONAL SERVICE DELIVERY</b>								
<b>2-F.1</b>	Conduct a time and task analysis of direct services, indirect services, and non-counseling services being provided by counselors to determine how their time is being allocated.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>2-G.1</b>	Conduct an operational review of the Students Health Services program to address staffing levels, nurse-to-student ratios, and the allocation of nurses across campuses.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>2-H.1</b>	Implement the 2014 program evaluation, identifying areas where improvement is needed and develop an implementation and evaluation plan.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>2-I.1</b>	Increase all high school library collection to 12 items per student to meet the state minimum standard.	(\$142,001)	(\$142,001)	(\$142,001)	(\$142,001)	(\$142,001)	(\$710,005)	\$0
<b>TOTALS-CHAPTER 2</b>		<b>(\$165,115)</b>	<b>(\$154,835)</b>	<b>(\$154,927)</b>	<b>(\$142,897)</b>	<b>(\$142,897)</b>	<b>(\$760,671)</b>	<b>\$0</b>

## Management Response

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
Management of Metropolitan Nashville Public Schools should:			
2-A.1	Develop a plan for reducing the concentrations of high-poverty populations in existing K-8 magnet schools.	<b>Partially Accept</b> The district recognizes that in some K-8 magnet programs there are high concentrations of students who qualify for free and reduced lunch. However, the magnet school enrollment process is based on student and parent choice. The district added a recruiter in fall 2014 to assist schools in East Nashville and model Pre-K centers in their recruiting efforts. Beginning in the fall of 2015, the recruiter will also work with magnet schools.	Recruiter Hired: October 2014  Recruitment Efforts Ongoing
2-B.1	Identify and implement behavior management strategies that have been proven effective in reducing the need for disciplinary actions for all students and in reducing racial disparities in discipline.	<b>Accept</b> The district was selected to participate in PASSAGE (Positive and Safe Schools Advancing Greater Equity) in the summer of 2014. PASSAGE is an initiative being conducted by the Annenberg Institute that focuses on the reduction of discipline disparities. The district is currently modifying its student Code of Conduct and disciplinary practices to address this issue. In addition to PASSAGE, the district is utilizing the community school model to work with community agencies to identify partners and programs that have the ability to work with schools and students to address student behavior and the need for additional social and emotional support.	Summer 2015  Progress Monitoring Ongoing
2-C.1	Implement behavior management strategies that have been proved effective in reducing racial disparities in discipline, especially those associated with placement in disciplinary alternative education settings.	<b>Accept</b> In addition to the response to 2-B.1, the district has adopted the use of restorative practices to reduce suspensions and expulsions. In addition, the "Why Try" program will be expanded to include elementary and high school students in need of additional services and intervention. The district recognizes the need exists for a progressive discipline plan and is working with the state Department of Education to review and revise discipline codes and severity indexes.	Summer 2015

## Management Response

EDUCATION SERVICE DELIVERY

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
2-D.1	Increase the ethnic and language diversity of the ENCORE program by including assessments that are effective in the identification of gifted students from underrepresented populations.	<b>Accept</b> Beginning in fall 2014, CogAT (Cognitive Abilities Test) Form 7 (updated from Form 6) was administered to all qualifying students. Research studies show that CogAT Form 7 is more effective in identifying students from under-represented groups, such as students with limited English proficiency. In the 2015-16 school year, the HOPE Scale will be used as a screener for the identification of K-1 gifted and talented students. The HOPE Scale is a useful measure to identify students from low-income families and minority backgrounds. In the spring of 2016, after a review of the impact of these new measures on the composition of Encore participation, the use of alternate assessments (i.e., Naglieri, Ravens) will be considered for subsequent years. Additionally, the use of local/school norms may be used to identify gifted/talented students in certain schools that have had historically low participation in Encore.	2015-2016; further review for 2016-2017
2-E.1	Evaluate the intervention process to identify factors contributing to the large number of non-qualifying referrals for special education services.	<b>Accept</b> S-Team (Support Team) training has been revised to reflect the State Response to Intervention and Instruction Model (RTI 2 - 11/2014) and is currently being rolled out district-wide. Non qualifying referrals are being tracked for state indicators. During the 2009-2010 school year, MNPS was utilizing a new data system and data quality was not as consistent as it is now. The district will continue to use data to refine the S-Team process. It is important to note that not all referrals for special education go through an S-team process. Additionally, MNPS has a legal obligation to honor parent requests for assessments, whether or not district employees suspect a disability.	Ongoing through 2015-2016
2-F.1	Conduct a time and task analysis of direct services, indirect services, and non-counseling services being provided by	<b>Accept</b> The Executive Director for School Counseling will create a survey	May 2015

## Management Response

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
	counselors to determine how their time is being allocated.	instrument for school counselors to gather data on tasks. The survey will be administered in late February 2015 and the final report will be submitted to the Chief Academic Officer in May.	
2-G.1	Conduct an operational review of the Students Health Services program to address staffing levels, nurse-to-student ratios, and the allocation of nurses across campuses.	<b>Partially Accept</b> The district currently conducts an annual operational review. This process is conducted in partnership with the Metropolitan Nashville Health Department and evaluates program implementation, performance and staffing. As a result of this process, five additional nurses were added in the fall of 2014. All schools currently have nursing services and MNPS continues to evaluate the need for additional services.	Operational Review conducted annually
2-H.1	Implement the 2014 program evaluation, identifying areas where improvement is needed and develop an implementation and evaluation plan.	<b>Reject</b> As stated in 2-G.1, the district currently provides nursing services for all schools and a process exists to evaluate program effectiveness and the need for additional services. Implementation of this recommendation would result in a significant budget increase in student health services.	N/A
2-I.1	Increase all high school library collection to the 12 items per student to meet the state minimum standard.	<b>Accept</b> The office of school librarians will submit the cost to fully fund the high school library collections in the FY15-16 budget.	January 2016

## CHAPTER 3 – IMPACT OF CHARTER SCHOOLS ON METROPOLITAN NASHVILLE PUBLIC SCHOOLS

### BACKGROUND

Charter schools were conceived in the early 1990s as a new type of public school that would be free from many laws and administrative mandates imposed on traditional public schools. Charter schools would be incubators for innovation, benefitting the public education enterprise as a whole through their example as well as benefitting the students they served. Their proponents saw charter schools as a means to respond to the difficulties faced by low-performing public schools, particularly those in urban areas. Charter schools would have more flexibility to respond to the particular needs of struggling students yet still be held accountable for performance at expected levels. As a result, legislation in many states began by authorizing charters to serve primarily at-risk students.

A hallmark of charter schools in Tennessee and across the country is their exemption from some of the laws and rules that apply to public schools. In addition to exemptions noted in statute, Tennessee charter schools may obtain waivers through the authorization process. They may also apply to the school board or the state commissioner of education at a later time for waivers. In exchange for flexibility in operations, Tennessee charter schools are expected to serve as a source of reform and innovation in education. They should also fulfill some or all of these other purposes: improve student learning, close achievement gaps among student subgroups, provide options for parents, create new professional opportunities for teachers, apply innovative teaching methods, and exchange flexibility at the campus level for greater accountability for student performance.

### CHAPTER HIGHLIGHTS

- Charter school enrollment has grown dramatically since the first charter was opened in 2003.
- High performing charter schools offer an opportunity for the School System to improve the academic performance of its students. Therefore, there is a demand in the community to expand alternatives to persistently low performing traditional schools.
- Financial resources must be repurposed when a student transfers from the School System to a charter school.
- The School System requires a means of capturing and recovering indirect and administrative costs associated with charter schools.
- Better communication, coordination of services, and information sharing would enable the School System and charter schools to optimize educational resources.

## CHARTER SCHOOL LEGISLATION IN TENNESSEE

The Tennessee Public Charter Schools Act (2002) provides Tennessee with an “alternative means within the public school system for ensuring accomplishment of the necessary outcomes of education by allowing the establishment and maintenance of public charter schools that operate within a school district structure but are allowed maximum flexibility to achieve their goals.” Traditional public school district boards may authorize charter sponsors to open and operate a school, they may convert existing schools to charter status by board action, and they may convert a school to charter status in response to a petition from parents or faculty. In addition, a sponsor organization may seek a charter from the state’s Achievement School District.

Charter school authorizers are urged to follow a standard application evaluation process. Authorizers accept charter applications by April 1 for schools to open in the fall of the next year. Once the charter agreement is signed and in place, the local board determines whether the school is meeting the terms set out in the charter, but it does not govern the school. Similarly, neither the state board of education nor the state education agency governs charter schools. Each charter school is governed by an independent body that establishes the programs, hires staff, and sets the expenditure budget for the school. Each year the charter school submits audit and performance reports to the authorizer and to the state education agency.

In overseeing charter school sponsors, the authorizing school district may revoke the charter for a material breach of charter agreements. The charter school sponsor could appeal the authorizer’s decision to deny or revoke a charter. Over the period 2002 to 2013, 67 sponsors in Tennessee appealed when their applications were denied, 21 successfully. Of the 21 successful appeals to the state, 17 were all part of the same set of applications denied for “fiscal impact” by Memphis. Only two successful appeals occurred in Nashville. The authorizing board evaluates academic and operating performance of charter schools, and each year charter schools report on operational and academic performance to the Comptroller’s Division of Local Government Audit. The Metropolitan Nashville Public Schools (the School System) has a districtwide accountability system called the Academic Performance Framework that it uses to rate an individual school on academic progress, academic attainment and college readiness, reduction of achievement gaps, and measures of school culture.

Originally, the Tennessee charter school law limited student eligibility to attend charter schools to those students in low-performing schools or students eligible for free and reduced-price lunch. In 2009, Tennessee lawmakers amended the Public Charter Schools Act of 2002 to expand enrollment to all students, increase the cap on the number of charter schools, and expand the role of the state board of education in the authorizing process. In 2011, more requirements were removed along with the cap on the number of charter schools permitted in Tennessee. Charter schools are not subject to school zones within a school district and are now open to any student in the district (and to students outside the school district, if permitted in the charter agreement). The law provides enrollment guidance to charter schools with more applicants than capacity allows.

From 2002 to 2011, local boards of education were the only authorizing bodies. In 2011, legislation passed to enable the Achievement School District to authorize charters to serve students zoned to schools labeled “priority” in the state accountability system. The Achievement School District is a statewide school district that authorizes charter school operators to take over and turn around low-

performing schools. Achievement School District schools opened in fall 2012, and the program is slowly expanding. One school, Brick Church Middle School, became part of the Achievement School District in 2012 and is called Brick Church College Prep. Currently, the Achievement School District serves about 4,200 students in Tennessee, with fewer than 300 of those students in Nashville.

In 2012, school districts were permitted to charge charter sponsors an application fee. They were also permitted to withhold Basic Education Program funds to cover required contributions to benefit programs. In 2013, the Tennessee General Assembly amended the Charter Schools Act to give charter management organizations that operate multiple schools ways to meet requirements for meaningful parent participation in governance. Bidding requirements are now consistent for all public schools, and sponsor-authorizer collaboration regarding whether a charter is a new school or a conversion school is permitted.

In 2014, the General Assembly passed legislation that gives the state board of education final authority over charter school authorization in school systems with at least one “priority” school. Previously, if the state board believed the charter appeal had merit, it remanded the appeal to the local board, giving the local board instructions to authorize the school. Now the state board may by-pass the local board and authorizes operation of the school directly. The decision of the state board is final and not subject to appeal.

Charter school funding follows the student. The authorizing district allocates funds to each authorized charter school in an amount equal to the per-student state and local funding the school district receives. Federal funds are also allocated to charter schools according to federal law and regulations. Charter schools may apply for and receive grants as well as receive gifts and donations. In 2013-2014, the School System’s charter school funding approached \$40,000,000 and is projected to be \$50,100,000 for the 2014-2015 budget year.

As charter schools have grown, the need for training and support has increased. In 2011, the state’s Director of Charter Schools provided training to local school boards to help them serve as effective charter authorizers. The National Association of Charter School Authorizers provides professional support to authorizers. The National Association of Charter School Authorizers evaluated the School System’s authorizing practices and awarded it a substantial grant to support development of its performance management framework and its renewal, replication and closure applications, policies and procedures.

In addition to state and national support resources, the Tennessee Charter School Association and the Tennessee Charter School Incubator have provided leadership training and professional development for charter school administrators, educators, and sponsors. In 2013, the Association and the Incubator merged to form the Tennessee Charter School Center. The Center now provides charter school incubation and support, as well as policy and advocacy services.

The state education agency works with school districts, the Charter School Center, and others to identify and disseminate best practices. For the period August 2011 through December 2012, the Tennessee Department of Education awarded start-up grants to 15 charter schools approved by local boards.

## THE SCHOOL SYSTEM'S CHARTER SCHOOL HISTORY

The School System opened its first charter school in 2003, a year after the Tennessee General Assembly passed the state's charter school law. Consistent with requirements at the time, charter schools were open only to students eligible because of family income level or because of assignment to the attendance zone of a low-performing school. The first charter school was Smithson-Craighead Academy, an elementary school. The sponsors were approved to open a middle school in 2009. However, Smithson-Craighead Middle School closed at the end of the 2012-2013 school years due to persistent performance problems. Smithson-Craighead Academy remains open and is improving rapidly.

KIPP Academy Nashville middle school opened in 2005. The LEAD Academy middle school opened in 2007 and added grades 9 through 12, one grade at a time, in the years 2010 through 2013. New Vision Academy opened in 2010 for students in grades 5 and 6.

The Nashville mayor led the creation of the Tennessee Charter School Incubator in 2009. The purpose of the Incubator was to support new leaders of charter schools and to support experienced school leaders who want to transform low-performing schools. The expectation for performance was that within two years of attending an incubated charter school, students will score at proficient or advanced levels on state tests and gain more than one year of academic growth. The Incubator later merged with the Tennessee Charter School Association to create the Tennessee Charter School Center. The Center supports student achievement growth and professional development. It also helps recruit board members and school staff for new charter schools during the early launch stage.

Expansion of charter schools in Nashville has led to other changes. The School System created an administrative position to manage charter school applications and oversee requirements for compliance. In December 2010, the School System's board, the mayor, and the director of schools signed a compact pledging to work together to support excellent education for all students. The Nashville Compact centered on four shared commitments:

- To rely on, cultivate, develop, and support highly effective school leaders and teaching professionals.
- To disseminate and implement at scale schools that are student-centered, pursuing innovation, and actively sharing demonstrated best practices.
- To empower parents by offering meaningful choices for students and developing creative ways to engage families in the design and success of their school.
- To collaborate as partners in the city-wide effort to provide an excellent education for all students and, as partners, work to share best practices between classrooms, schools, and leaders.

To determine the perceptions of those most involved in the development of the Compact, a survey was conducted between December 2012 and January 2013 to gather feedback on each of the district, charter, and jointly-made commitments in the Compact. Made available to all charter schools, the School System's board and central office staff, city officials, and the Nashville Chamber of Commerce, it identified a number of strengths and challenges that resulted in recommendations for improvement **(Exhibit 3-1)**.

**Exhibit 3-1**  
**Compact Strengths, Challenges, and Recommendations**

Strengths	Challenges	Recommendations
District and charter commitment of high-performing schools regardless of type.		Involve all interested community and school stakeholders in a strategic planning process to chart a course for charter growth and district pursuit of high-performing schools.
	Collaborate on the ways to cultivate, develop, and support highly effective school leaders and teachers.	Continue discussions among school operators, the Tennessee Charter School Center, and district’s human capital division aimed at expanding efforts to attract effective school leaders and teachers.
Charter access to and participation in certain areas of professional development.	Encourage greater involvement by charter personnel in professional development related to instructional matters including common core implementation.	
	Reduce the lack of trust related to the sharing of facilities.	Involve district, charter, and city leaders in efforts to ensure that district facilities are appropriately shared without contributing to rapid, unplanned, and unsustainable expansion.
Charter access to district teacher recruitment tools including website and teacher fairs.		
District/charter meetings offering opportunities for sharing lessons learned across school types such as the Shared Practices Fellowship at Lipscomb University.		Build sustainability for communicating best practices through improved structural and formal collaboration.
District providing access to surplus materials, purchasing economy, data-sharing, and other direct services.	Determine why all charters do not take advantage of the opportunities related to accessing district direct services.	Ensure that all charters are knowledgeable concerning the opportunities available to access district direct services.
District/charter commitment to ensuring charters serve students equitably.		
District authorizing and oversight functions embracing National Association of Charter School Authorizers principles.		
District/charter efforts to develop common data measures for high-performing schools.		
District efforts to engage and inform parents about school options and choices.		
District ensuring charters have equitable access to Federal grants and programs.		
District funding transparency ensuring 100 percent of per pupil funding is transferred to charters.		

Source: Implementation Annual Report 2012, Metropolitan Nashville Public Schools’ Office of Innovation.

In November 2010, the School System's board approved three new charter schools to open in fall 2011: Drexel Preparatory Academy, Liberty Collegiate Academy, and Nashville Preparatory. At the beginning of the 2011-2012 school year, Nashville had 11 charter schools serving 2,204 students.

By the 2012-2013 school year, Nashville had 14 charter schools including Brick Church College Prep serving 3,859 students. During the 2012-2013 school year, the School System's charter school student population was overwhelmingly minority and low-income (more than 90 percent for each category). Special education students made up 12 percent of the charter school enrollment, and English language learners made up 6 percent.

In fall 2013, five new charter schools opened, and by February 2014, the School System had 17 charters and one charter school (Brick Church College Prep) governed by the state's Achievement School District. Four more schools are scheduled to open in fall 2014 and seven more in 2015 for a total of 26 charter schools or 27 including Brick Church College Prep. The School System's enrollment has been growing at about two percent per year between 2008-2009 and 2013-2014, with enrollment approaching 83,000 students in 2013-2014, up from 75,049 in 2008-2009. The School System's budget for charter schools is growing as well. The School System has 19 schools operating or authorized to open in the 2014-2015 school year. Charter school outlays have grown from approximately \$4,600,000 in 2009 to almost \$50,100,000 projected for 2015. During the same period, general fund operating expenses have increased from approximately \$618,000,000 in 2009 to \$790,000,000 projected for 2015.

## LOOKING FORWARD

Educators and policymakers across the country are watching the state of Tennessee and the city of Nashville to see how innovation and reform are supporting student achievement. According to a member of the School System’s board of education, the board has supported family choice for many years with magnets, charters, and specialty schools. They view charter schools as “key components in our school improvement strategy” but assert that the current growth rate of charter schools and related growth of required payments to charter schools are not sustainable into the future.

The School System is at a crossroads with respect to planning for the future. The community is seeking to create the right mix of traditional schools, charter schools, and other choice schools, but evidence-based guidance in this matter is lacking. Over time, more data and operating experience will be assets to planning, including financial planning for the system as a whole.

Academic Performance Framework results (and state accountability ratings) for the entire district (including the charter schools) point to the need for leadership in turning around low-performing schools or closing some schools entirely. Creating new or transformed schools and helping average schools do even better should engage stakeholders from all parts of the School System. Information exchange, expansion of best practices, and collaborative activities to improve the capabilities of educators are likely to enable the School System to grow while maintaining and improving quality of academic and operating performance.

## FISCAL IMPACT OF CHARTER SCHOOLS

The Tennessee Public Charter Schools Act (the Act) is contained in Tennessee Code Annotated 49-13-101 through 137. The law states that public charter schools are part of the state public education system and receive public funding through the School System. Charter schools are opened after reaching an agreement with the local school district. The state allots a per pupil amount through a combination of state and local revenues, which are part of the Basic Education Program based on average daily membership to fund the cost of education for charter school students. When students transfer to a charter school, the state and local revenue allotment follows them to their new school. The School System retains much of the costs because teachers and other school staff do not necessarily leave to work in the charter school. Charter school leaders are able to recruit and hire their own staff, and teachers are able to decide if they want to work in a charter school. Over time, the School System may strategically realign assets in order to reduce expenditures where they are no longer needed (eliminate underutilized storage, transportation, buildings, etc.)

The Act states in 49-13-112 (b) (3) (B) on funding that, *“Allocations to the charter school may not be reduced by the local education agency for administrative, indirect or any other category of cost or charge except as specifically provided in a charter agreement. ... If the charter agreement includes an agreement with the local education agency for administrative or other services, then the local education agency may withhold funds to cover the costs of those services.”*

The School System has separate charter agreements with each charter school. Typically, the agreements are five years for the initial term with five additional years that renew automatically. The most recent charter school contract template, which was renewed in 2014, contains the following fee for service provision:

*“The Parties may enter into a separate fee for services agreement, for the provision of services not already identified in this agreement by the Chartering Authority to the Charter School (e.g., computer network services, food services, exceptional education providers, Electronic Registrar Online/School net professional development service). Failure of the Charter School to enter such an agreement shall not be grounds for revocation or non-renewal of this Agreement.”*

During the initial charter school years, the School System charged charter schools the same indirect cost rate percentage charged on federal and grant funds for administrative services. In 2008, the state attorney general ruled that the practice was illegal and the School System discontinued the practice because of the political friction it was causing in the charter community. Following the attorney general’s opinion in 2008, the law was changed to include the provision allowing administrative charges if they are included in the agreement with the charter. This issue has received much attention during the latest state legislative session, and the Comptroller’s Office of Research and Education Accountability is studying the issue.

The National Association of Charter School Authorizers is an organization dedicated to advancing excellence and accountability in the charter school sector and to increasing the number of high-quality charter schools across the nation. According to the organization’s website, “National Association of Charter School Authorizers works to improve the policies and practices of authorizers—the organizations designated to approve, monitor, renew, and, if necessary, close charter schools. National

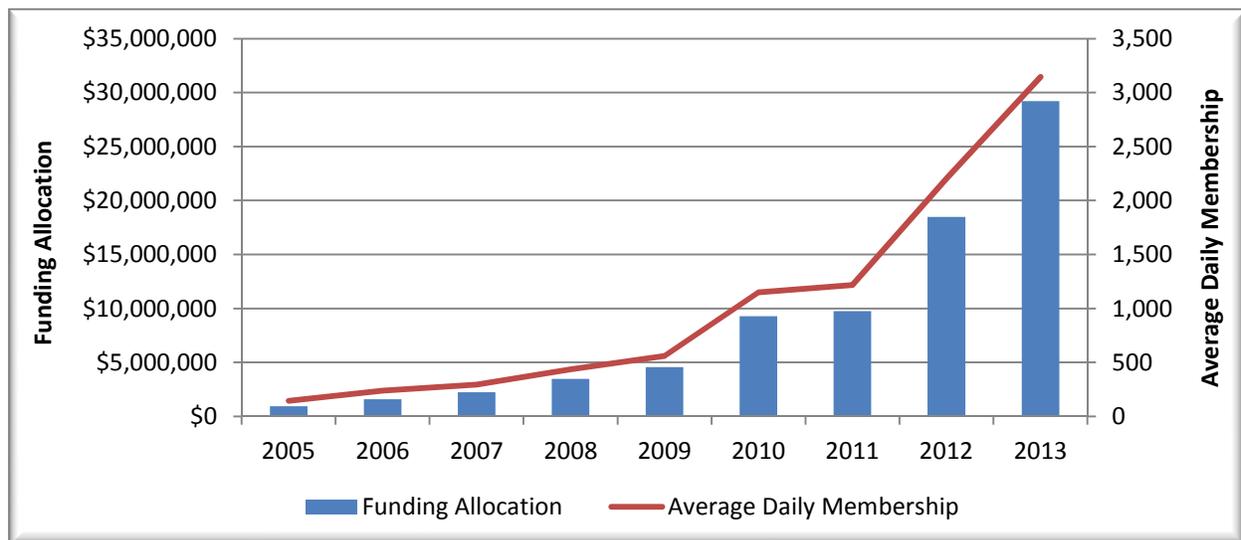
Association of Charter School Authorizers provides professional development, practical resources, consulting, and policy guidance to authorizers. It also advocates for laws and policies that raise the bar for excellence among authorizers and the schools they charter.”

In 2013, National Association of Charter School Authorizers published a report entitled, “The State of Charter School Authorizing.” The report examined adoption of National Association of Charter School Authorizers’ best practices, known as Essential Practices, by charter school authorizers. National Association of Charter School Authorizers considers adoption of these practices a principal yardstick for measuring authorizer performance. The report summarizes findings of a comprehensive national survey that covers authorizer adoption of Essential Practices, as well as important context about the evolution of the authorizing profession itself.

In a section of the report entitled, “Where the money comes from”, researchers found that just over half of authorizers receive fees deducted from school payments to support their operations. A fifth (20 percent) reported that they are funded at least in part through the budget of a parent organization. The majority of local education agency authorizers report receiving funding from oversight fees (58 percent) and just under half report funding from the district budget (48 percent).

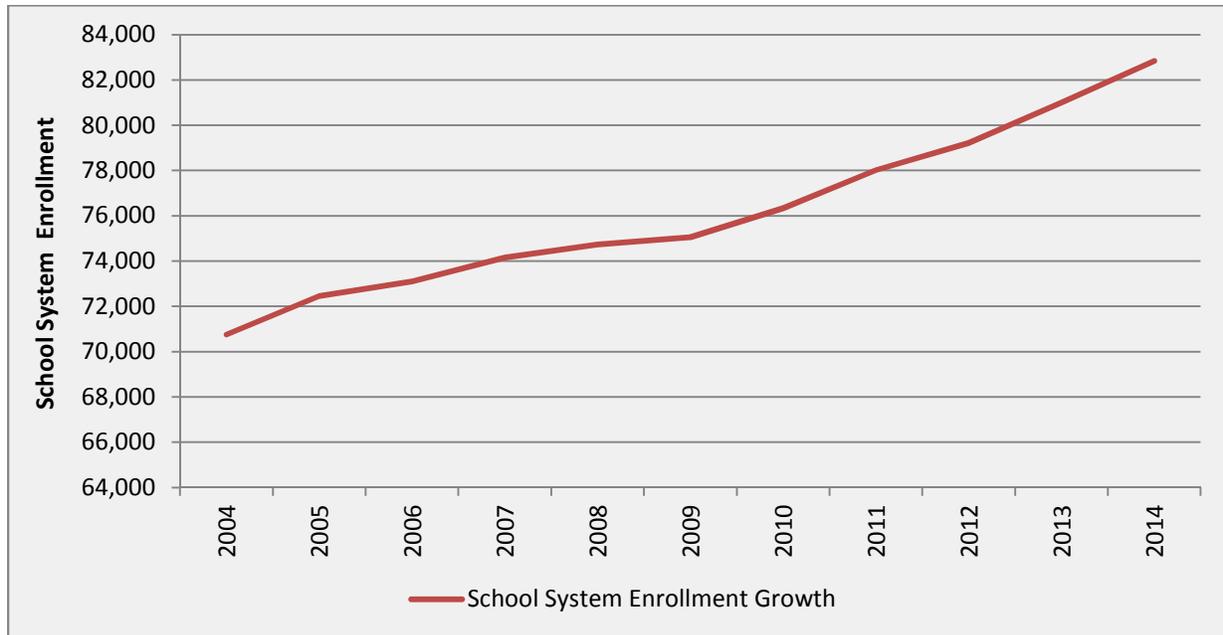
Ensuring that the School System recovers a fair portion of its cost is critical in light of the increase in charter school allocations over the years. **Exhibit 3-2** shows the historical trend for the state and local revenue per-pupil allocation, which increased 44 percent from \$6,463 in Fiscal Year 2005 to \$9,283 in Fiscal Year 2013. **Exhibit 3-3** shows School System’s enrollment growth from Fiscal Year 2004 to 2014.

**Exhibit 3-2**  
**Charter School Total Allocations, Fiscal Years 2005-2013**



Source: Metropolitan Nashville Public Schools Director of Budgeting and Financial Reporting. Actual Charter School Payments.

**Exhibit 3-3**  
**Metropolitan Nashville Public Schools' Enrollment Growth**  
**Fiscal Years 2004 through 2014**



Source: Schedules of Enrollment provided by Metropolitan Nashville Public Schools.

During Fiscal Year 2012, the budgeted per pupil charter school allocation was \$8,385. For Fiscal Year 2015, the allocation will be \$8,758. The charter school allocation for Fiscal Year 2015 is estimated to be approximately \$50,000,000. This amount represents an increase of 184 percent since Fiscal Year 2012.

During the same period, the School System's operating budget increased 17 percent from approximately \$674,000,000 in Fiscal Year 2012 to a projected \$790,000,000 (includes a \$16,000,000 transfer to debt service) in Fiscal Year 2015.

**Exhibit 3-4** provides an overview of budgeted charter school allocations from Fiscal Years 2012 through 2015.

**Exhibit 3-4  
Budgeted Charter School Allocations  
Fiscal Years 2012-2015**

Description	FY 2012	FY 2013	FY 2014	FY 2015	Percent Increase FY 2012-2015
Per Pupil Rate	\$8,385	\$9,283	\$9,015	\$8,758	4%
Budgeted Charter Allocation	\$17,666,000	\$25,191,600	\$39,454,500	\$50,096,500	184%
Total Operating Budget	\$674,034,800	\$720,420,300	\$746,420,300	\$790,067,500 *	17%
Charter Enrollment	2,204	3,146	4,350	5,450	147%
Charter Enrollment Annual Increase	81%	43%	38%	25%	

Source: Metropolitan Nashville Public Schools Budget Book for Applicable Years. Metropolitan Nashville Public Schools Director of Budgeting and Financial Reporting.

\*Includes \$16,000,000 for debt service

In addition to the property taxes, sales taxes, and state Basic Education Program funds that make up the General Purpose Fund shown in **Exhibit 3-5**, the School System also obtains federal, state, and local grants. Some of the grant funds are transferred to charter schools as part of the Title I (disadvantaged youth), IDEA (disability education), and other programs. Nutrition funding is received on a per-student basis by School System run schools and additional amounts (not shown in **Exhibit 3-5**) by charter schools for nutrition programs. Charter schools may also directly obtain other grant funding in some cases. All Basic Education Program transfers to charter schools are budgeted within the General Fund line item.

**Exhibit 3-5  
Education Funding  
Fiscal Years 2014**

Selected Items	2014 Budget
General Fund	\$ 746,420,300
Nutritional Services Fund	\$ 42,058,900
Federal, State, Local Grants	\$ 84,598,000

Source: Metropolitan Nashville Public Schools.

Each year the School System allocates a higher percentage of its budget (5 percent in 2013-2014) to support charter schools since there is a higher percentage of its students attending those schools. Operating two systems of education under separate governance and administrative arrangements results in duplicative costs including unshared administrative costs.

When students transfer to a charter school, the revenue that the State of Tennessee mandates to be spent on a per-pupil basis by the School System through the state and local revenue per pupil allocation follows the student.

State and local revenue per pupil amounts are set by the state each year. In 2014, 47 percent of those funds were provided by the state to Davidson County. The remainder came from local option sales taxes and property taxes within Davidson County.

One challenge for the School System is that some of the costs to educate the departing students remain. Facility costs, teachers, and other staff do not necessarily go away once the students have left. The charter school hires its own teachers, and administrative staff, and must secure its own facilities. As a result, some residual fixed costs remain in the School System unless strategically eliminated by management.

Charter schools provide their own facilities through private donors and various financing techniques. As a result, the School System does not incur increased capital costs to pay for additional schools and classrooms. Seven of the 19 charter schools lease space from the School System, which provides an additional income to offset idle space costs.

Many believe that the additional costs are justified if the existence of charter schools result in higher student achievement. Many proponents of education reform believe that innovative and high-achieving charter schools can be an important part of improving educational outcomes. The US Federal Government supports this view.

On February 17, 2009, President Obama signed into law the American Recovery and Reinvestment Act of 2009 (the Act). This historic legislation is designed to stimulate the economy, support job creation, and invest in critical sectors, including education. The Act lays the foundation for education reform by supporting investments in innovative strategies that are most likely to lead to improved results for students, long-term gains in school and the School System's capacity, and increased productivity and effectiveness.

The Act provides \$4,350,000,000 for the Race to the Top Fund, a competitive grant program designed to encourage and reward states that are creating the conditions for education innovation and reform; achieving significant improvement in student outcomes, including making substantial gains in student achievement; closing achievement gaps; improving high school graduation rates; and ensuring student preparation for success in college and careers.

States receive points for implementing ambitious plans to reform education within the state. One aspect of the program designed to pave the way for more charter schools is: *... "ensuring successful conditions for high-performing charters and other innovative schools."* States receive 40 out of a possible 485 points for meeting this criterion.

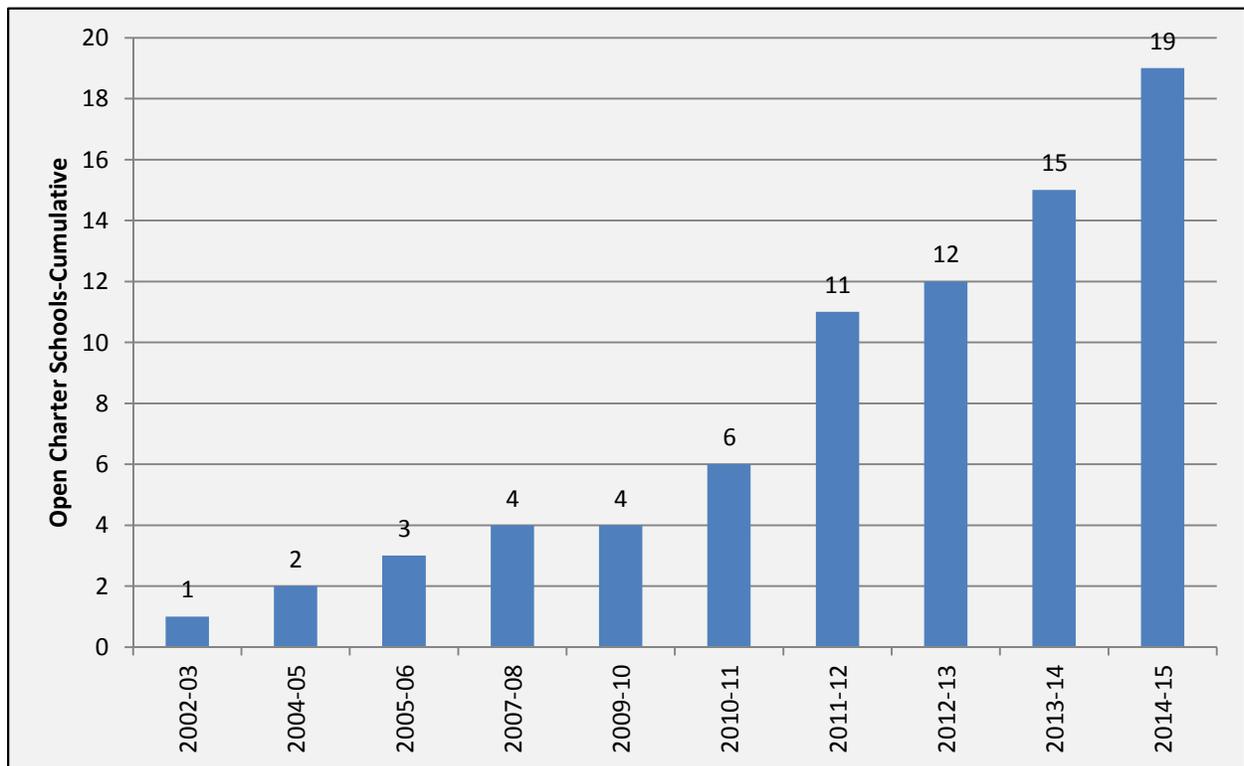
In March of 2011, Tennessee was announced as one of the first winners of a Race to the Top grant and was awarded \$501,000,000 to spend over four years (beginning in the 2010-2011 school year through the 2013-2014 school year).

Passed in May 2011, Public Chapter 466 amended Tennessee's charter school law Title 49, Chapter 13 by removing both the student eligibility limitations on charter schools and the statewide and local caps on the numbers of charter schools. Now, any student may attend a public charter school, and there is no cap on the number of charter schools that may be authorized across the state.

Several charter schools authorized since 2003 have closed operations. One closed during Fiscal Year 2010 after one year of operation. Smithson-Craighead Middle School closed during Fiscal Year 2013 after three years of operation. Two closed during Fiscal Year 2014 within three weeks of each other, one in April 2014, the other in May 2014. One closed after three years of operation, the other closed after two years.

**Exhibit 3-6** shows the net cumulative growth in charter schools since Fiscal Year 2003. The exhibit accounts for charter schools that closed operations during the period. During the 2014-2015 school year, the School System will fund 19 charter schools.

**Exhibit 3-6**  
**Open Charter Schools-Cumulative**  
**Fiscal Years 2003 through 2015**



Source: Schedules of Charter School Enrollment and Allocations provided by Metropolitan Nashville Public Schools.

The School System has experienced considerable enrollment growth, however not as dramatically as that of the charter schools. Since the first charter school was authorized in Fiscal Year 2003, enrollment has grown from 70,759 students in Fiscal Year 2004 to 82,863 students in Fiscal Year 2014.

**Exhibit 3-7**  
**Average Annual Enrollment Growth Rate-Metropolitan Nashville Public Schools and Charters**  
**Fiscal Years 2004-2014**

Year	Metropolitan Nashville Public Schools' Enrollment	Charter School Enrollment	Percent of Enrollment
2004	70,759	149	0.2
2005	72,458	143	0.2
2006	73,109	239	0.3
2007	74,155	294	0.4
2008	74,733	435	0.6
2009	75,049	559	0.7
2010	76,329	1,148	1.5
2011	78,014	1,216	1.6
2012	79,212	2,204	2.8
2013	81,001	3,146	3.9
2014	82,863	4,350	5.3
Average Students Added Per Year	1,210	420	

*Source: Schedules of Charter School Enrollment and Allocations provided by Metropolitan Nashville Public Schools.*

**REVENUE IMPACT**

**Exhibit 3-8** presents a profile of the School System’s operating expenditures, Basic Education Program per-pupil amounts, and charter school payments between fiscal years 2007 and 2013. Amounts for Fiscal Years 2014-2015 are the School System’s estimates.

**Exhibit 3-8  
Metropolitan Nashville Public Schools Operating Expenses,  
Basic Education Program Amounts, and Charter School Payments**

Fiscal Year	Per Pupil Rate Basic Education Program Charter Payments	Total Charter School Payments	Metropolitan Nashville Public Schools’ Operating Expenses	Charter School Payments as a Percentage of Operating Expenses	Charter Enrollment/School Enrollment
2007	\$7,559	\$2,223,102	\$548,839,563	0.4%	0.4%
2008	\$7,975	\$3,466,227	\$588,117,978	0.6%	0.6%
2009	\$8,176	\$4,571,921	\$618,147,204	0.7%	0.8%
2010	\$8,090	\$9,285,713	\$620,865,374	1.5%	1.5%
2011	\$8,013	\$9,741,228	\$640,391,112	1.5%	1.6%
2012	\$8,385	\$18,478,109	\$670,374,458	2.8%	2.8%
2013	\$9,283	\$29,202,006	\$714,441,258	4.1%	3.9%
2014 Estimated	\$9,015	\$39,454,500	\$746,420,300	5.2%	5.3%
2015 Estimated	\$8,758	\$50,096,500	\$790,067,500*	6.0%	6.4%

Source: Metropolitan Nashville Public Schools’ Budget Books for Applicable Years and Financial Information provided by Metropolitan Nashville Public Schools.

\*Includes \$16,000,000 of transfers to the Debt Service Fund.

## COST IMPACT

The key question for determining fiscal impacts is whether enrollment reductions allow a district to achieve expenditure reductions commensurate with revenue reductions. Fixed costs are incurred regardless of whether students attend traditional or charter schools. The problem is that some fixed costs, such as building maintenance, computer network infrastructure, and health services do not vary based on enrollment. Therefore, teachers and their salaries are a key cost driver tied to student enrollment. Also, mentioned earlier, the School System does not incur capital costs on behalf of charter schools since charter schools provide their own facilities. Seven of the 19 charter schools lease space from the School System, which provides an additional income to offset idle space costs.

However, it is not always possible to reduce teacher costs proportionate to losses in revenue. For these costs to be reduced significantly, the school would need to close altogether. In the long run, closing a school permits immediate reductions in expenditures on energy, maintenance, and janitorial staff. In addition, closing a school reduces the number of principals and clerical staff and facilitates achieving the teacher and staff reductions.

Determining the revenue appropriated when students leave the School System and transfer to a charter school is fairly straightforward. However, determining the cost impact on the affected school is more challenging because educational costs per student vary depending on student needs and demographics. For example different funding formulas are used for low-income students versus special needs or academically gifted students.

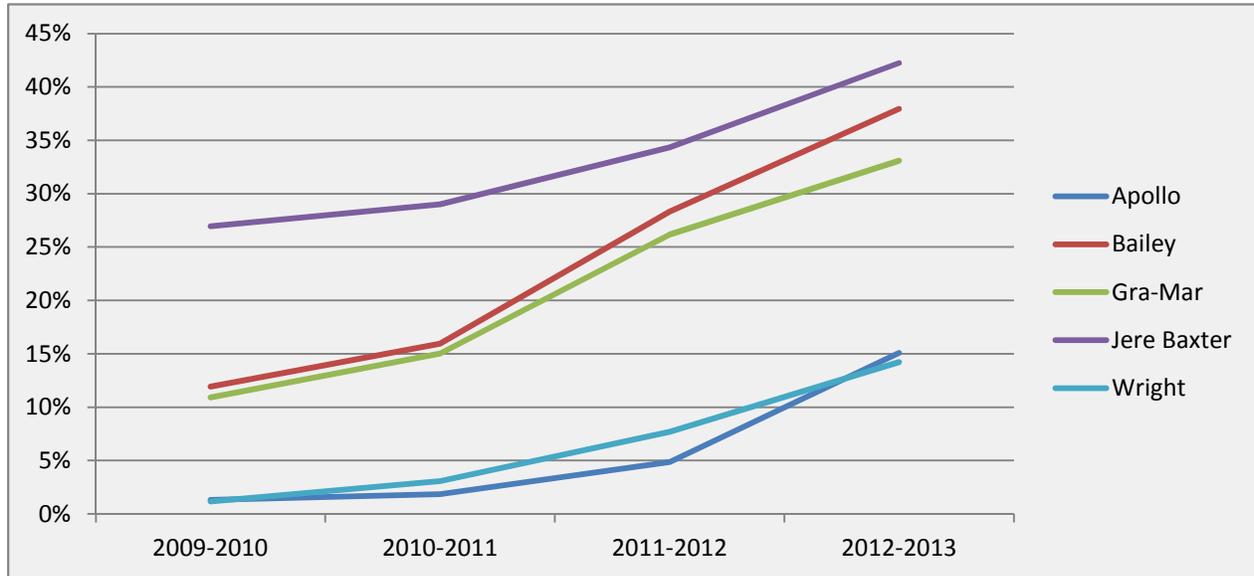
At the beginning of the school year, individual school budgets are established based on student attendance projections. Once school begins, school budgets are adjusted based on the day-20 student count. As staffing needs are evaluated, including the impact of attrition, teachers are moved around to accommodate the change in enrollment among all schools. This process further complicates isolating the cost impact of charter schools on individual schools.

The review team conducted a review of five schools that lost enrollment to charter schools between Fiscal Years 2010 through 2013. The following schools were selected based upon the increasing number of students transferring to charter schools each year. It should also be noted that other schools within the School System experienced little or no enrollment loss as a result of charter schools.

- Apollo Middle School
- Bailey Middle School
- Gra-Mar Middle School
- Jere Baxter Middle School
- Wright Middle School

Although the review team could not isolate the specific cost impact charter schools had on individual schools, we reviewed total enrollment for each school, students transferred to charter schools, expenditures per student, the number of teachers, and teacher cost per pupil information for each of the selected schools. What is clear from this analysis is that each of the selected schools has lost an ever increasing percentage of their enrollment to charter schools as shown in **Exhibit 3-9**.

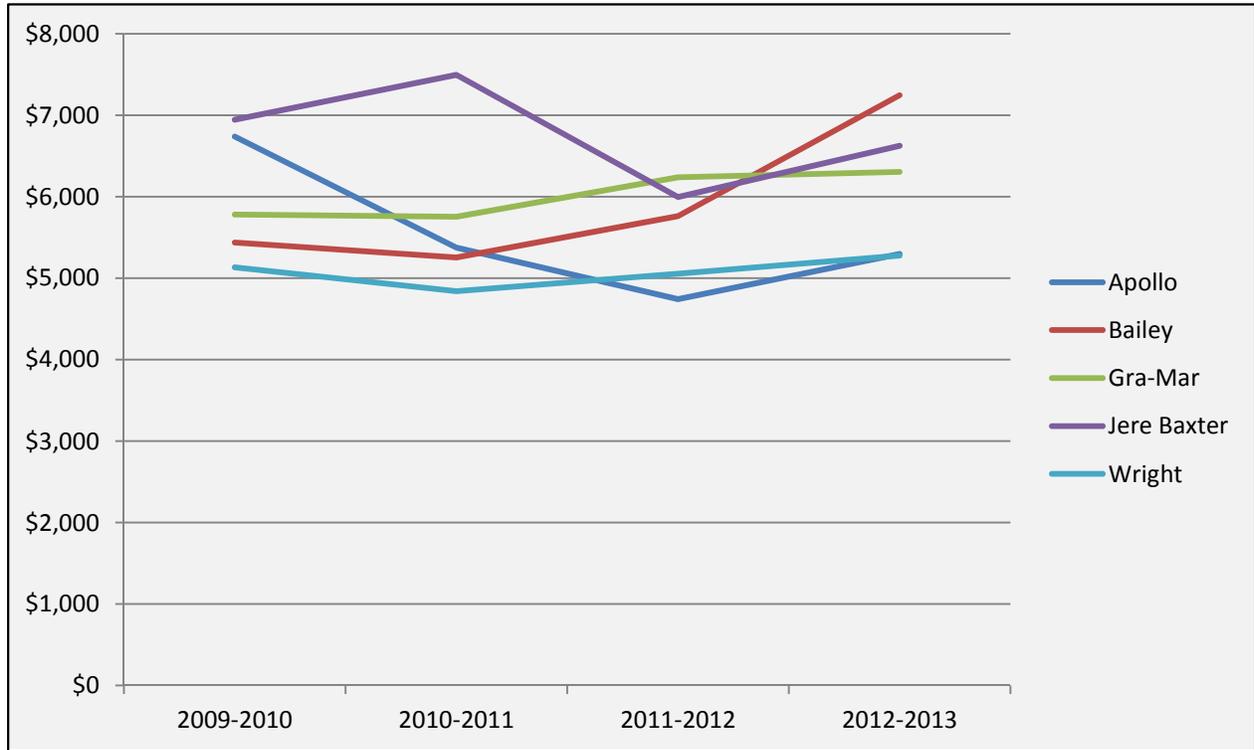
**Exhibit 3-9**  
**Transferred Students as a Percentage of Current Enrollment**  
**Selected Schools Fiscal Years 2010 through 2013**



Source: Information Provided by Metropolitan Nashville Public Schools through Budgeting & Financial Reporting and Student Assignment Service Departments.

It is also clear that there is no consistent pattern for expenditures per student. Bailey, Gra-Mar, and Wright show increases in expenditures per student over the period while Apollo's shows decreases through Fiscal Year 2012 and a slight increase in Fiscal Year 2013. Jere Baxter shows an increase during Fiscal Year 2011, a decrease during Fiscal Year 2012, and an increase in Fiscal Year 2013.

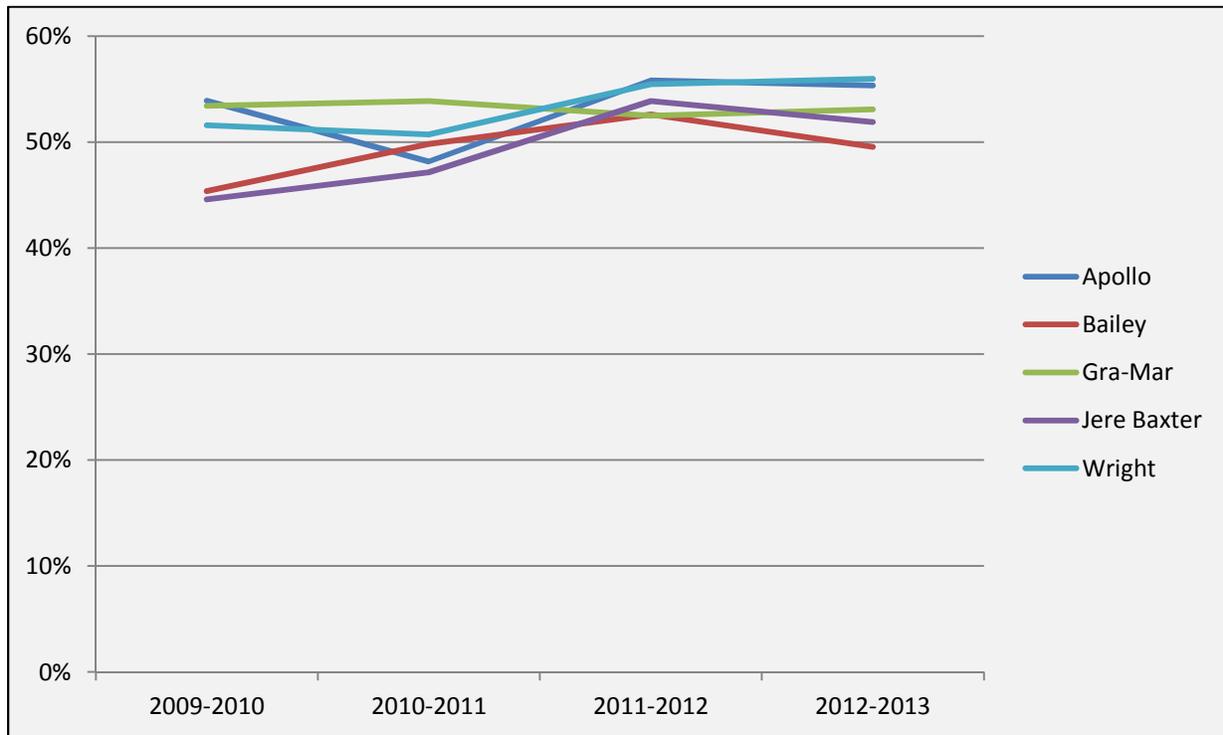
**Exhibit 3-10**  
**Expenditures per Student**  
**Selected Schools Fiscal Years 2010 through 2013**



Source: Information Provided by Metropolitan Nashville Public Schools through Budgeting & Financial Reporting and Student Assignment Service Departments.

Teacher salaries comprise about 50 percent of General Purpose expenditures at the school level. This percentage is roughly the same for all the selected schools and remained fairly constant between Fiscal Years 2010 through 2013 as shown in **Exhibit 3-11**.

**Exhibit 3-11**  
**Teacher Salaries as a Percentage of Total Expenditures**



Source: Information Provided by Metropolitan Nashville Public Schools through Budgeting & Financial Reporting and Student Assignment Service Departments.

At a high level, it is difficult to establish a correlation between the number of students transferring to charter schools and the fiscal impact on costs at individual schools. Too many factors come into play such as student demographics, teacher experience, grade level, staffing formulas, inflation, and other variables.

The review team used correlation analysis in an attempt to identify a relationship between transfers of students to charter schools and cost variables such as teacher compensation. A correlation coefficient is a statistical measure of the degree to which changes to the value of one variable predict change to the value of another. In positively correlated variables, the value increases or decreases in tandem. In negatively correlated variables, the value of one variable increases as the value of the other decreases.

Correlation coefficients are expressed as values between +1 and -1. A coefficient of +1 indicates a perfect positive correlation: A change in the value of one variable will predict a change in the same direction in the second variable. A coefficient of -1 indicates a perfect negative correlation: A change in the value of one variable predicts a change in the opposite direction in the second variable. Lesser degrees of correlation are expressed as non-zero decimals. A coefficient of zero indicates there is no discernable relationship between fluctuations of the variables.

The review team used Excel’s correlation function to calculate the correlation coefficients shown in **Exhibit 3-12**. Although some schools show strong correlations in some categories, overall results are inconsistent, and inconclusive. These results underscore the difficulty of isolating the cost impact of students transferring to charter schools. Too many other variables come into play. A much more detailed analysis would need to be conducted to isolate the fiscal impact at the individual school level.

**Exhibit 3-12  
Correlation Coefficients  
Cost Impact of Students Transferring to Charter Schools**

School	Students Transferred and General Purpose Expenditures	Students transferred and Teacher Costs	Students transferred and Expenditures per student	Students transferred and Teacher Costs Per Student
Apollo	0.77	0.74	-0.67	-0.43
Bailey	0.67	0.98	0.85	0.97
Gra-Mar	-0.98	-0.98	0.96	0.99
Jere Baxter	-0.74	-0.29	-0.52	0.39
Wright	0.80	0.87	0.63	0.86

Source: Information Provide by Metropolitan Nashville Public Schools through Budgeting & Financial Reporting and Student Assignment Service Departments.

**Exhibits 3-13** through **3-14** on present profiles of the schools selected for this analysis.

**Exhibit 3-13  
Apollo Middle School Profile  
Fiscal Years 2009-2013**

Apollo Middle School	Fiscal Year			
	2009-2010	2010-2011	2011-2012	2012-2013
Student Enrollment	459	489	947	775
Students transferred to Charters	6	9	46	117
Number of Teachers	27	22	52	48
Actual General Purpose (GP) Expenditures	\$3,091,850	\$2,627,497	\$4,489,158	\$4,103,980
Teacher GP Salary Costs	\$1,665,921	\$1,265,547	\$2,505,511	\$2,270,939
Expenditures per Student	\$6,736	\$5,373	\$4,740	\$5,295
Students transferred to Charters\Total Enrollment	1%	2%	5%	15%
Teacher Salary Costs per Student	\$3,629	\$2,588	\$2,646	\$2,930
Teacher Salary Cost per Student\Total Cost per Student	54%	48%	56%	55%

Source: Information Provide by Metropolitan Nashville Public Schools through Budgeting & Financial Reporting and Student Assignment Service Departments.

**Exhibit 3-14  
Bailey Middle School Profile  
Fiscal Years 2009-2013**

Bailey Middle School	Fiscal Year			
	2009-2010	2010-2011	2011-2012	2012-2013
Student Enrollment	537	495	498	440
Students transferred to Charters	64	79	141	167
Number of Teachers	22	23	30	29
Actual General Purpose (GP) Expenditures	\$2,919,944	\$2,600,292	\$2,869,075	\$3,187,600
Teacher GP Salary Costs	\$1,324,765	\$1,295,236	\$1,509,204	\$1,578,838
Expenditures per Student	\$5,438	\$5,253	\$5,761	\$7,245
Students transferred to Charters\Total Enrollment	12%	16%	28%	38%
Teacher Salary Costs per Student	\$2,467	\$2,617	\$3,031	\$3,588
Teacher Salary Cost per Student\Total Cost per Student	45%	50%	53%	50%

Source: Information Provided by Metropolitan Nashville Public Schools through Budgeting & Financial Reporting and Student Assignment Service Departments.

**Exhibit 3-15  
Gra-Mar Middle School Profile  
Fiscal Years 2009-2013**

Gra-Mar Middle School	Fiscal Year			
	2009-2010	2010-2011	2011-2012	2012-2013
Student Enrollment	532	506	443	426
Students transferred to Charters	58	76	116	141
Number of Teachers	26	23	26	30
Actual General Purpose (GP) Expenditures	\$3,074,802	\$2,910,828	\$2,763,445	\$2,685,241
Teacher GP Salary Costs	\$1,641,890	\$1,567,685	\$1,450,057	\$1,425,652
Expenditures per Student	\$5,780	\$5,753	\$6,238	\$6,303
Students transferred to Charters\Total Enrollment	11%	15%	26%	33%
Teacher Salary Costs per Student	\$3,086	\$3,098	\$3,273	\$3,347
Teacher Salary Cost per Student\Total Cost per Student	53%	54%	52%	53%

Source: Information Provided by Metropolitan Nashville Public Schools through Budgeting & Financial Reporting and Student Assignment Service Departments.

**Exhibit 3-16  
Jere Baxter Middle School Profile  
Fiscal Years 2009-2013**

Jere Baxter Middle School	Fiscal Year			
	2009-2010	2010-2011	2011-2012	2012-2013
Student Enrollment	501	507	489	457
Students transferred to Charters	135	147	168	193
Number of Teachers	37	36	30	30
Actual General Purpose (GP) Expenditures	\$3,479,806	\$3,800,123	\$2,931,675	\$3,026,976
Teacher GP Salary Costs	\$1,551,435	\$1,791,625	\$1,579,423	\$1,570,354
Expenditures per Student	\$6,946	\$7,495	\$5,995	\$6,624
Students transferred to Charters\Total Enrollment	27%	29%	34%	42%
Teacher Salary Costs per Student	\$3,097	\$3,534	\$3,230	\$3,436
Teacher Salary Cost per Student\Total Cost per Student	45%	47%	54%	52%

Source: Information Provided by Metropolitan Nashville Public Schools through Budgeting & Financial Reporting and Student Assignment Service Departments.

**Exhibit 3-17  
Wright Middle School Profile  
Fiscal Years 2009-2013**

Wright Middle School	Fiscal Year			
	2009-10	2010-2011	2011-2012	2012-2013
Student Enrollment	860	876	896	872
Students transferred to Charters	10	27	69	124
Number of Teachers	40	41	49	50
Actual General Purpose (GP) Expenditures	\$4,413,458	\$4,240,492	\$4,526,566	\$4,601,412
Teacher GP Salary Costs	\$2,276,606	\$2,149,724	\$2,509,806	\$2,575,173
Expenditures per Student	\$5,132	\$4,841	\$5,052	\$5,277
Students transferred to Charters\Total Enrollment	1%	3%	8%	14%
Teacher Salary Costs per Student	\$2,647	\$2,454	\$2,801	\$2,953
Teacher Salary Cost per Student\Total Cost per Student	52%	51%	55%	56%

Source: Information Provided by Metropolitan Nashville Public Schools through Budgeting & Financial Reporting and Student Assignment Service Departments.

Although the cost impact of charters schools on individual schools is difficult to determine without detailed analysis on a school by school basis, there are other administrative costs incurred by the School System, a portion of which could reasonably be allocated to charter schools based on benefits received. Presently, the School System does not allocate any administrative costs to charter schools. This issue is discussed in **Observation 5-A** in the Financial Management Chapter. Potentially allocable administrative cost categories and budgeted amounts for Fiscal Year 2014-2015 are shown in **Exhibit 3-18**.

**Exhibit 3-18**  
**Metropolitan Nashville Public Schools' Administrative Costs Benefiting Charter Schools**

Function	Cost	Potentially Could be Shared with the Charter Schools based on Benefits Received?
Office of Director of Schools	\$ 739,800	Yes
Board of Education	\$ 417,600	Yes
Chief Financial Officer	\$ 353,600	Yes
Employee Benefits	\$ 784,400	Yes
Fiscal Services	\$ 1,398,200	Yes
Special Education Supervision	\$ 1,010,200	Yes
Attendance Services	\$ 350,100	Yes
Office of Innovation	\$ 238,500	Yes
Information Management & Decision Support	\$ 3,895,600	Potentially
Research & Evaluation	\$ 1,906,700	Potentially
ELL Supervision	\$ 1,175,300	Potentially

Source: Metropolitan Nashville Public Schools' Office of Innovation and Fiscal Year 2014-2015 Budget.

## DETAILED OBSERVATION

### OBSERVATION 3-A

**The School System has not developed a means of capturing and recovering indirect and administrative costs incurred on services performed for charter schools.**

In addition to providing funding for charter schools, the School System is charged with administering various paperwork, certifications, and benefits for the charter schools. However, the School System does not receive any revenue for these administrative activities and only receives reimbursement for direct services. Some departments have developed fee structures to charge charter schools for specific services provided. These include fees for food services, use of the common enrollment system, and transportation services. However, other legitimate indirect and administrative costs are not being identified and charged. For example, some of the coordinator of charter school's time is not being absorbed by charter schools even though the charter schools benefit from the coordinator's services.

The following are the benefits of developing a cost allocation plan.

- Allows the entity to recover administrative costs.
- Can be used to determine costs which allow the entity to charge the user directly.
- Helps the entity to determine how much to charge for its specific service costs.
- Enables an entity to manage funds more effectively by identifying all administrative/overhead costs placing the entity in a position to justify additional funding.

The School System has already identified activities throughout the system from which charter schools are benefiting. The costs of these activities could be tabulated and allocated to charter school based on relative benefit. **Exhibit 3-19** provides a sample of these activities.

**Exhibit 3-19**  
**Metropolitan Nashville Public Schools' Activities Benefiting Charter Schools**

Department	Service(s)	Cost to School System	Cost to Charters
Office of Innovation	<ul style="list-style-type: none"> <li>Charter Coordinator</li> <li>Contract review</li> <li>Accountability management</li> <li>General point of contact</li> </ul>	<ul style="list-style-type: none"> <li>1 FTE</li> <li>Office is probably understaffed given the # of charters and attention to accountability</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
Benefits	<ul style="list-style-type: none"> <li>Benefits enrollment and administration</li> <li>Calculate employee benefits</li> <li>Address questions and concerns</li> </ul>	<ul style="list-style-type: none"> <li>1-2 FTE</li> <li>Higher cost per FTE due to charters not having consistent data quality and process</li> </ul>	<ul style="list-style-type: none"> <li>Charters pay the employer portion of benefits</li> <li>No charge for School System administration time</li> </ul>
Human Resources	<ul style="list-style-type: none"> <li>Process background checks and new hire forms</li> <li>Allow charters to send new hires to orientation</li> </ul>	<ul style="list-style-type: none"> <li>FTEs for processing (number undetermined)</li> <li>No direct cost for attending already scheduled orientations</li> </ul>	<ul style="list-style-type: none"> <li>Charter employees pay for background checks</li> <li>Don't pay for School System human capital FTEs to process</li> </ul>
IT/Data/Training	<ul style="list-style-type: none"> <li>SMS access through VPN and network "pipe"</li> <li>SMS training</li> <li>Assistance with inputting master schedules, calendars to state, and loading information to SMS</li> <li>eRate processing</li> </ul>	<ul style="list-style-type: none"> <li>Cost of SMS access (incremental) and cost of internet access</li> <li>At least 2-3 FTEs for all of the data quality, data integrity work</li> <li>Percent of FTE for eRate</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
Student Assignment Services	<ul style="list-style-type: none"> <li>Managing lottery service and application</li> <li>Pulling student addresses for recruitment</li> <li>Charter school database</li> </ul>	<ul style="list-style-type: none"> <li>Lottery service and software application</li> <li>Time to respond to charter requests for information</li> </ul>	<ul style="list-style-type: none"> <li>\$1,500 for lottery service</li> <li>No charge for ad hoc reporting services</li> </ul>
Student Services	<ul style="list-style-type: none"> <li>Discipline coordinator when expulsion occurs</li> </ul>	<ul style="list-style-type: none"> <li>Discipline coordinator's time</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
Business Office & Purchasing	<ul style="list-style-type: none"> <li>Processing Basic Education Program payments</li> <li>Managing ledger</li> <li>Send annual budget to state</li> <li>Processing contracts</li> <li>Negotiating contracts charters can "piggyback" on</li> </ul>	<ul style="list-style-type: none"> <li>FTEs in business and finance operations (number undetermined)</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>

**Exhibit 3-19**
**Metropolitan Nashville Public Schools' Activities Benefiting Charter Schools (Cont'd)**

Department	Service(s)	Cost to School System	Cost to Charters
Operations	<ul style="list-style-type: none"> <li>• Providing space/property for charter schools</li> <li>• Identifying possible sites</li> </ul>	<ul style="list-style-type: none"> <li>• Rent, utilities, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Charters pay \$5 per sq. ft. when using School System property</li> </ul>
Federal Programs	<ul style="list-style-type: none"> <li>• Help charters develop SIP and spending plan</li> <li>• Process spending plans and order purchases and/or personnel</li> </ul>	<ul style="list-style-type: none"> <li>• FTEs for Title I Coordinator (number undetermined)</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>
Central Services	<ul style="list-style-type: none"> <li>• Process inventory</li> <li>• Provide mailroom services</li> <li>• Scan student records</li> <li>• Scan applications</li> </ul>	<ul style="list-style-type: none"> <li>• FTE time</li> <li>• Incremental systems usage</li> </ul>	<ul style="list-style-type: none"> <li>• Charged for mail services, but nothing else</li> </ul>
Special Education	<ul style="list-style-type: none"> <li>• Liaison to charters</li> <li>• Pull IEP's for new charters</li> <li>• Child Find, initial screening by, psychologists</li> <li>• Process IDEA payment</li> <li>• Assist with difficult IEP teams</li> </ul>	<ul style="list-style-type: none"> <li>• FTEs (number undetermined)</li> </ul>	<ul style="list-style-type: none"> <li>• A small percentage of IDEA money held back for liaison's salary; no other payments</li> </ul>
EL Services	<ul style="list-style-type: none"> <li>• Initial language assessment</li> <li>• Interpretation</li> <li>• Translation</li> </ul>	<ul style="list-style-type: none"> <li>• Time</li> </ul>	<ul style="list-style-type: none"> <li>• EL department has a price list to cover costs</li> </ul>
Professional Development	<ul style="list-style-type: none"> <li>• Training</li> </ul>	<ul style="list-style-type: none"> <li>• Time</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>

Source: Metropolitan Nashville Public Schools Director of Budgeting and Financial Reporting.

**RECOMMENDATION 3-A.1**

**Include a provision in charter school agreements that allows for authorizer oversight fees and develop a cost allocation plan that supports the fees, which should be charged to charter schools that benefit from the School System's administrative services.**

A cost allocation plan would provide the School System with support for developing authorizer oversight fees to recover some of the costs it incurs on behalf of charter schools. The chief financial officer should direct the director of Budgeting and Financial Reporting to identify, tabulate, and summarize all administrative and indirect costs that benefit charter schools. The director of Budgeting and Financial Reporting should establish a rational basis for cost allocation and develop a plan to distribute these

costs to the charter schools. The allocation plan should be updated each year and the costs should be allocated to new charter schools as they come online.

### FISCAL IMPACT

This recommendation can be implemented with existing resources.

### OBSERVATION 3-B

**Metropolitan Nashville Public Schools’ performance lags state and local expectations. High performing charter schools offer an opportunity to improve performance.**

The Tennessee Department of Education reports that performance on state tests tends to be improving in math but that improvement is not as consistent in reading/language arts. In 2013, 25 elementary and middle schools and two high schools received a “Target” rating, meaning that student performance was well below expectations. An additional 29 elementary and middle schools and three high schools received a “Review” rating, meaning that the school needs attention and monitoring because performance is not at expected levels. These data demonstrate the broad need for performance improvement in the School System. Educators argue that it takes time--years in some cases—to turn around a low-performing school, **but students and families cannot wait for processes to unfold over long periods of time.**

In 2013, the Center for Research on Educational Outcomes at Stanford University reported that Tennessee’s charter school students outperformed their matched counterparts in traditional schools. Researchers report that charter school students in Tennessee gained the equivalent of an additional 86 days of learning in reading and 72 days in math per year. Data for Nashville alone were not reported.

**Exhibit 3-20** shows charter school ratings on the School System’s Academic Performance Framework as well as state performance ratings.

**Exhibit 3-20  
Metropolitan Nashville Public Schools Charter School Performance  
2010-2011 through 2012-2013**

School Name	Grades Served	Academic Performance Framework Rating 2011*	Academic Performance Framework Rating 2012*	Academic Performance Framework Rating 2013*	State Rating 2012*	State Rating 2013*	Comments
Boys Prep	7-8			Target			Closed
Brick Church College Prep**	5-6						Now part of the Achmt. School District
Cameron College Preparatory	5-7			Review			
Drexel Preparatory Academy	K-6			Target			Closed

**Exhibit 3-20  
 Metropolitan Nashville Public Schools Charter School Performance  
 2010-2011 through 2012-2013 (Cont'd)**

School Name	Grades Served	Academic Performance Framework Rating 2011*	Academic Performance Framework Rating 2012*	Academic Performance Framework Rating 2013*	State Rating 2012*	State Rating 2013*	Comments
KIPP Academy Nashville	5-8	Satisfactory	Excelling	Excelling	Focus	Reward (progress)	
Knowledge Academy	5-8			Achieving			
LEAD Academy Middle School	5-8	Satisfactory	Satisfactory	Satisfactory			
LEAD Academy High School	9-12		Satisfactory	Satisfactory			
Liberty Collegiate Academy	5-8			Excelling	Focus	Reward (progress)	
Nashville Classical Charter School	K-1						Opened in Fall 2013 with K only
Nashville Prep	5-8		Excelling	Excelling	Focus	Reward (progress)	
New Vision Academy	5-8		Excelling	Satisfactory	Reward (progress)		
Purpose Prep	K-1						Opened in Fall 2013 with K only
Smithson-Craighead Academy	K-4	Target	Target	Target			
Smithson-Craghead Middle School	5-8	Target	Target	Target	Priority		Closed August 2013
STEM Preparatory Academy	5-8		Excelling	Excelling	Focus	Reward (progress)	

Source: Metropolitan Nashville Public Schools Academic Performance Framework data, 2014.

\*Blank cells indicate that there was insufficient data to evaluate performance.

\*\*Brick Church College Prep, founded in 2012, is a charter school within the Achievement School District. Brick Church Middle School is part of the School System and not a charter school. The two schools are located at the same physical address.

To track schools' progress, the U.S. Department of Education required that Tennessee identify three groups: Reward schools: Ten percent of schools throughout the state with the highest achievement or overall growth; Focus schools: Ten percent of Tennessee's schools with the largest achievement gaps; and Priority schools: The bottom five percent of the state's schools in terms of academic performance.

Of the 13 School System’s charter schools with data to evaluate in 2013, five had strong Academic Performance Framework ratings (“Excelling” and “Achieving”), three had “Satisfactory” ratings, and five had low ratings (“Review” and “Target”). In 2013, four charter schools received the state’s “Reward” rating for progress made. One school with performance problems, Smithson-Craighead Middle School, was closed at the end of the 2012-2013 school year. Brick Church College Prep was not a charter school and became part of the Achievement School District. It did not receive an Academic Performance Framework rating in 2013. Boys Prep and Drexel Preparatory Academy were also closed. Of the 16 charter schools shown in Exhibit 3-20, the Academic Performance Framework shows 13 charters with ratings: four with a ‘2013 Status’ of ‘excelling,’ one with an ‘achieving’ status, three with a ‘satisfactory’ status, one with a ‘review’ status, and four with a ‘target’ status. Two charter schools were not rated because they had ‘insufficient data’ one school –Brick Church College Prep—left the School System and did not have data to evaluate.

Several charter sponsors meet expectations for improved student performance (KIPP Academy, Liberty Collegiate, Nashville Prep, and STEM Preparatory). These better-performing schools all serve the middle-school grades, not elementary or high school. Over time, more data will be available and the School System’s leaders will have a clearer picture of charter school performance at all grade levels.

Immediate attention to low performance through charter conversion or other means of school transformation is critical for students. Best practices include using data to make informed decisions to guide instruction and support (**Exhibit 2-13, #7**). Data and rating systems for the School System are already in place, and educators are familiar with them. As soon as test, participation, and graduation results can be determined, the School System’s leaders should identify persistently low performing schools and immediately begin efforts to transform their progress.

District leadership already recognizes the need for school transformation and the potential for benefits that could come from charter schools. The 2014 Metropolitan Nashville Public Schools “Request for Proposals for New Schools” to open for the 2015-2016 school year establishes two priorities for new charter schools: conversion of traditional schools that are in “Target” status, and new schools in areas of Nashville where school enrollment exceeds capacity. In the future, the School System might also consider conversion of schools that are persistently rated in the “Review” category.

Offering strong charter school sponsors with a good track record in Tennessee the opportunity to operate and improve low-performing schools is a promising innovation, but not a sure thing. Not all charter operators or sponsors are skilled in turnaround efforts, so the authorizer needs to develop appropriate applications for turnarounds and to review promising applications with special care. Once a charter sponsor is approved to turn around a low-performing school, charter school experts and stakeholders need to work together to implement and monitor the changes. Simply handing off a low-performing school to a new operator—whether it is a charter operator or a school turnaround organization--and doing little else is a prescription for disappointment.

### **RECOMMENDATION 3-B.1**

**Move quickly to address problems of low performing schools throughout the district. Charter schools are one tool that can be used to transform school performance.**

The reason for dispatch in transforming a persistently low-performing school has much to do with supporting students. Also important is the message that quick action communicates to stakeholders, policymakers, and the wider community. The School System will want to be seen acting quickly to support student achievement and put a halt to low or declining performance. Such action will reflect positively on the School System as well as the efforts at the schools in need of transformation.

The School System's administrators should develop a streamlined charter school application for eligible high-performing charter sponsors. Completion of the application would signal strong interest in transforming a school, and the School System's leaders should evaluate the application(s) and move forward more quickly than the typical process permits. If charter sponsors do not apply to transform a persistently low-performing school, then the district leaders should be poised to work with experts at local and regional universities and think tanks as well as high-performing leaders already working within the district to begin the transformation process as quickly as possible.

### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

### **OBSERVATION 3-C**

**There is little communication and coordination between charter schools and public schools and among charter schools resulting in little sharing of information and effective practices or coordination of services to optimize resources.**

A primary rationale for the creation of charter schools was to encourage innovation and experimentation that could be exported into the traditional schools." However, in the past two decades since charter schools started operating, both public school and charter school educators agree that "very little of what has worked for charter schools has found its way into regular classrooms." Collaboration between the two groups has been stymied by competition for students, resources, and funding and by critical and hostile perceptions of each other. This national pattern is also evident in the School System. Community stakeholders' perceptions of charter schools in the School System are mixed. While some community members indicated that the charter schools appear to be the better schools in the system, others considered the charter schools a liability as they "drain our best students from our general schools." Community stakeholders would like the School System to decide whether or not charter schools are part of the district. If the response is affirmative, then the School System should "treat the public charter schools better and as part of the district." While the School System has within its Office of Innovation (iZone) a Charter Schools department headed by a coordinator whom charter school principals consider supportive and helpful, charter school principals have encountered barriers to the School System's resources, especially to data. Charter school principals indicated that the School System assigns lower priority to their data requests and takes a long time to respond. Similarly, charter school teachers indicated that while public school teachers have personal access to the School System's professional development system, charter schools are limited to one point of contact with the professional development system, making it more cumbersome for charter school teachers to review offerings and register for them. Some charter school administrators fault the School System for not allocating enough resources to charter schools, especially those that are struggling, and for treating charter schools as a "separate entity."

Both charter school principals and staff interviewed are cognizant of a lack of understanding among public school staff and among the community of what charter schools do. These interviews revealed little formal communications between charter schools and their public school counterparts, regardless of proximity.

Although the District-Charter Collaboration Compact the School System signed in 2012 calls for “actively sharing demonstrated best practices through improved structural and formal collaboration,” interviews of both charter school and public school administrators and staff showed the absence of exchange of such information. The review team identified effective practices charter schools developed and implemented, but information on those practices has not been communicated to other schools or shared. The School System does not offer any formal opportunities for communication and coordination with public school administrators and staff. While the School System’s programs and services such as professional development are open to charter school staff, their participation is selective, reflecting their needs.

There is also little communications and collaboration among the charter schools. Charter schools, according to several charter school principals “do not speak with one voice.” Communication and collaboration among charter schools is fragmented, reflecting their own interests and academic standing. While the District-Charter Collaboration Compact encourages enhancing efficiencies through shared services contracts, collaboration in areas such as food services, transportation and purchasing is just emerging, involving only three of the charter schools.

There is a growing body of evidence of promising and effective cooperative practices between charter schools and traditional public schools. Collaboration involves a wide range of areas from instruction, teacher training, and administration to facilities and transportation. For example:

- The Somerville School District, Massachusetts is collaborating with Prospect Hill Academy, a K-12 charter school, in the adaptation and implementation of the charter school’s Collaborative Inquiry model in its two lowest performing schools to improve classroom instruction and student achievement. The model is being implemented by a joint administrative team. The three schools share an instructional coach and project coordinator. Implementation has shown significant academic improvement in the schools.
- Eight charter schools and 15 public school districts in the Santa Clara County, California formed a consortium to implement the Silicon Valley New Teacher Project. The teacher induction project aims to improve student learning by accelerating teacher effectiveness. Using this induction program, teachers are able to achieve in their second year results similar to teachers in their fifth year. This program is particularly helpful to charter schools whose teacher turnover is high.
- Hill View Montessori Charter and the Haverhill Public Schools, Massachusetts have maintained a strong relationship since the charter school’s inception in order to maximize limited resources. The charter school’s philosophy incorporates a positive attitude to the public school district. The charter school founders informed the public school district about their plan to start a charter school and discussed potential impact on the district. They continued communicating with the district throughout the process about areas likely to affect the district. The open communications established trust and led to collaboration. The district gained financially by leasing a building to the charter school and the charter school gained by obtaining lower

electricity rates through the district. The two also shared transportation, allowing greater utilization of the buses.

### **RECOMMENDATION 3-C.1**

#### **Increase communication and sharing of information on effective practices between charter schools and public schools to maximize instructional, administrative and financial resources.**

The director of schools, chief academic officer, and the executive director of Innovation jointly with a team of charter school principals should build on the District-Charter Collaboration Compact in developing and implementing a plan to increase formal communication and sharing of information on effective practices.

- The team should identify and review promising or proven charter school – public school best practices on communication and collaboration in a range of areas.
- Determine which of these practices are most applicable and financially advantageous to the School System.
- Initiate a formal plan for the continuation of the District-Charter Collaboration Compact implementation. Make the School System and community aware of the plan and refine it based on their input.
- Assign the Charter Schools coordinator in the Office of Innovation and a chief academic officer designated staff member to assist with and oversee the implementation of the plan.
- Track and assess communication, sharing, and implementation of effective practices across charter and public schools.

### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

### **RECOMMENDATION 3-C.2**

#### **Encourage communication and collaboration among charter schools to maximize instructional, administrative and financial resources.**

The Charter School coordinator should work with charter school principals to identify common issues and areas of operation that can be optimized using collaboration.

- Charter schools principals should schedule periodic meetings to discuss common issues and challenges and develop strategies to address these.
- Charter school principals should follow-up on the effectiveness with which these issues and challenges have been addressed, refine existing strategies and develop additional strategies and tactics, as needed.

- Charter school principals should increase their presence in the School System and advocate for their schools.
- Once charter school principals identify areas for collaboration and determine the most efficient way to collaborate, collaborating schools should assess the fiscal impact (savings) the respective collaboration will yield, and prepare a memorandum of understanding describing the collaboration, each partner's responsibilities and roles, and expected outcomes.
- Collaborating partners should review their collaboration effort annually and make appropriate modifications to improve efficiency and outcomes.

### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

### **OBSERVATION 3-D**

**There is recognized demand for the establishment of additional charter schools to offer a systemic alternative to parents and children attending persistently low performing traditional schools.**

The analysis presented in **Observation 3-C** is based on the criteria the School System's board established in 2014 regarding the location of new charter schools: conversion of traditional schools that are in "Target" status, establishing new schools in areas where school enrollment exceeds capacity, and, for future consideration, the conversion of schools that are persistently rated in the "Review" category.

The School System defines persistently low performing schools as schools that have been designated Target schools for three consecutive years. This definition can be expanded to include a combination of Target and Review classifications.

In 2013, 12 schools were designated Target schools and all but three as either Target or Review schools in 2011 and 2012 (**Exhibit 3-21**). Four of the 12 schools have been designated Target schools for three years and four as Target schools during two of the three years. Two of the remaining four schools were designated as Review schools in 2011 and 2012. As the Smithson-Craighead Middle School was closed at the end of the 2012-2013 school year and Bordeaux and Ross Elementary Schools will be converted into Pre-K Model Centers in 2014-2015, they are excluded from further consideration.

**Exhibit 3-21  
 Schools Designated Target in 2013 and Either Target or Review in 2011 and 2012**

School	Status in 2013	Status in 2012	Status in 2011
Bailey MS*	T	T	T
Smithson-Craighead Academy	T	T	T
Smithson-Craighead MS**	T	T	T
Cora Howe School	T	T	T
Bordeaux ES***	T	R	
Brick Church MS*	T	R	T
Cameron MS*	T	R	
Joelton MS	T	T	R
JB Whitsitt ES	T	R	R
Neely's Bend MS	T	T	
Ross ES***	T	R	R
Madison MS	T	R	T

Source: Metropolitan Nashville Public Schools Academic Performance Framework, October 2013.

\*Included in the turnaround group.

\*\*The Smithson-Craighead Middle School closed at the end of 2012-2013. Smithson-Craighead Academy was at risk of closing at the end of 2013-2014 if academic performance did not improve. However, the Smithson-Craighead Academy achieved a satisfactory rating and did not close at the end of 2013-2014.

\*\*\*Bordeaux and Ross Elementary Schools, although Target schools in 2013 are excluded from further analysis because they are being converted to Pre-K Model Centers.

The practice of co-locating two or more schools in the same building is a strategy being used in numerous cities across the country in an effort to make better use of under-utilized facilities. In most cases, but not all, a charter school is 'co-located' with an existing traditional school. Cities like New York, Chicago, Erie, Pennsylvania, and several in California are among those with some history of co-location. The efforts in New York have been extremely controversial with the current mayor moving to undo his predecessor's efforts to expand charters by stripping \$210,000,000 in capital funds intended for charter schools' facilities construction. In Los Angeles, California, the teachers' union supported teachers and parents who were resisting what the union referred to as the 'charter school co-location threat.' Some states, however, have attempted to be more pro-active. The Illinois School Code requires a school district to announce by December 1 each year all co-locations it proposes for the following school year. Tennessee requires districts to catalog by October 1 all underutilized and vacant properties owned by the districts as well as plans for their use. The lists are made available to charter operators and sponsors and the properties made available for use by the charters.

A variety of reasons have been offered for opposing, or at least questioning, the practice of co-locating charters with other district schools. First, a report by the Campaign for Educational Equity raises the issue of the violation of students' rights. The report states that many of New York City's co-located schools have 'inadequate facilities, oversized classes, restricted course offerings, and insufficient student supports that violate state education laws.' The Washington article identifies a number of co-location issues raised by parents and teachers including those related to restrooms, playground, parking, custodial services, discipline, and emergency planning. A report by a New York advocacy group, however, suggests that the negative effects of co-locating schools can be minimized by following identified best practices related to four areas—space, growth, resources, and process—which, if followed will result in decisions related to co-location issues more acceptable to all those involved.

**Exhibit 3-22**  
**Schools Designated Review in 2013 and Either Target or Review in 2011 and 2012**

School	Review in 2013	Status in 2012	Status in 2011
Cumberland ES	R	R	R
Glenview ES	R	R	T
Inglewood ES	R	T	R
Kirkpatrick ES	R	T	T
Neely's Bend ES	R	T	T
IT Creswell Arts MS	R	T	
Overton HS	R	T	
Stratford HS	R	T	
Whites Creek HS	R		

*Source: Metropolitan Nashville Public Schools Academic Performance Framework, October 2013.*

Regardless of how restrictive or expansive the definition of persistently low performing, the academic rationale (low performance) for bringing in charter schools affects a small number of schools.

In addition to persistent low performance, the School System also needs to consider the degree to which these schools are underutilized or overpopulated. As shown in **Exhibit 3-23**, the utilization of three schools designated as Target in 2013 and as Target or Review in the previous two years is below 40 percent; one school has a 51.3 percent utilization, and the utilization of the other five schools ranges from 62.1 to 99.2 percent. Persistently low performing schools that are underutilized are prime candidates for co-location of charter schools. Co-location refers to a charter school and a traditional school sharing the same building.

**Exhibit 3-23  
School Status, Capacity, Enrollment, and Utilization**

School	Status in 2013	Status in 2012	Status in 2011	Capacity	Enrollment	Percent Utilized
Bailey MS*	T	T	T	707	439	62%
Cora Howe School	T	T	T	170	117	69%
Brick Church MS* conversion school operated only 7 <sup>th</sup> and 8 <sup>th</sup> grades	T	R	T	823	173	21% part district school and part charter school
Cameron MS*	T	R		803	120	15% only operated 8 <sup>th</sup> grade
Joelton MS	T	T	R	456	277	61%
JB Whitsitt ES	T	R	R	551	544	99%
Neely's Bend MS	T	T		752	546	73%
Madison MS	T	R	T	891	751	84%

Source: Metropolitan Nashville Public Schools Academic Performance Framework, October 2013.

\*Included in the turnaround group.

Charter schools can also be established in areas with overcrowded schools. An analysis of the School System's utilization identified 40 campuses that have building utilization at 100 percent capacity or greater (**Exhibit 3-24**). The 2013 academic performance of these 40 schools was mixed. Six schools were classified as Excelling, three as Achieving, fifteen had a Satisfactory rating, twelve were classified as Review, and three were classified as Target on the Academic Performance Framework. One school did not have a rating due to insufficient data. These 40 campuses can be prioritized with regard to where charter schools could be located based on academic performance with the lowest performing having the highest priority or by degree of overutilization giving the most overcrowded the highest priority.

**Exhibit 3-24  
School Campuses with Utilization In Excess of 100 Percent Capacity or Greater**

School Name	Academic Performance Framework Ranking 2013	Percent Utility	School Name	Academic Performance Framework Ranking 2013	Percent Utility
Lakeview Design Center ES	S	135%	Fall-Hamilton Enhanced Option School	R	106%
Kirkpatrick Enhanced Option School ES	R	128%	McGavock Elementary School	R	106%
Paragon Mills Elementary School	S	124%	Una Elementary School	T	106%
Tusculum Elementary School	S	120%	H G Hill Middle School	S	105%
Julia Green Elementary School	S	117%	John Overton Comprehensive High School	R	105%
Glenview Elementary School	R	117%	Bellshire Design Center ES	S	105%
Bellevue Middle School	S	114%	Meigs Magnet Middle School	E	104%
Thomas A. Edison Elementary School	S	113%	Goodlettsville Elementary School	R	104%

**Exhibit 3-24  
 School Campuses with Utilization In Excess of 100 Percent Capacity or Greater (Cont'd)**

School Name	Academic Performance Framework Ranking 2013	Percent Utility	School Name	Academic Performance Framework Ranking 2013	Percent Utility
Ruby Major Elementary	S	113%	Hickman Elementary School	R	104%
Crieve Hall Elementary School	E	113%	Cole Elementary School	R	103%
Percy Priest Elementary School	S	112%	Hume-Fogg Magnet High School	A	103%
Dupont Tyler Middle School	T	111%	Martin Luther King, Jr. Magnet at Pearl HS	E	103%
Pennington Elementary School	R	111%	Glenciff Elementary School	R	103%
Gateway Elementary School	S	111%	Glendale Elementary School	E	102%
Westmeade Elementary School	A	110%	Taylor Stratton Elementary School	S	102%
Old Center Elementary School	E	110%	Stanford Montessori Elementary School	E	102%
J E Moss Elementary School	R	110%	J. F. Kennedy Middle School	R	101%
Head Magnet Middle School	A	109%	Eakin Elementary School	S	101%
Haywood Elementary School	S	109%	Alex Green Elementary School	T	101%
Cane Ridge Elementary School	*	109%	Harpeth Valley Elementary School	S	100%
Neelys Bend Elementary School	R	109%	Cane Ridge Comprehensive High School	S	100%

Source: Metropolitan Nashville Public Schools Academic Performance Framework, October 2013 and List of Schools, Capacity, and Facility Data.

Note: The School System has approved Capital Funding for Lakeview, Paragon Mills, Tusculum, Julia Green, Glenview, Thomas Edison, Una, Ruby Major, Percy Priest, JE Moss, Cane Ridge, Hume-Fogg, Martin Luther King, and Glenciff to build new schools and/or add classrooms or purchase land to alleviate overcrowding.

\*Insufficient data.

**RECOMMENDATION 3-D.1**

**Consider persistently low-performing campuses that are currently underutilized as potential sites for “in-school” charter programs, that is, charters that share a building with a traditional school, and school clusters that currently have campuses at which utilization rates are 100 percent or more as sites for future stand-alone charter schools.**

The chief academic officer jointly with the Office of Innovation executive director should develop a list of schools that are candidates for sharing their building with a charter school or for stand-alone charter schools to supplement their school. The list should be developed based on a combination of persistently low academic performance and under or over utilization of existing facilities criteria. The criteria used should be clearly defined.

For schools identified as candidates for co-location with charter schools, the chief academic officer jointly with the Office of Innovation executive director should determine if co-location is a viable option for these schools by:

- Performing a comprehensive review of the procedures and protocols currently in place in state legislation or state board of education policies that might influence the practice of co-locating schools.
- Reviewing all space requirements and available facilities at such schools.
- Reviewing the effect that co-location could have on available facilities (restrooms, auditoriums, playgrounds, parking, etc.) and programs (Pre-K, kindergarten, special programs, etc.).
- Delaying any consideration of co-location as a means for achieving a more effective use of these facilities until the above steps are completed.

The list of school should be prioritized. The list should be approved by the board and incorporated into the charter school application and review processes.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

## FISCAL IMPACT SUMMARY

	RECOMMENDATION	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 3: IMPACT OF CHARTER SCHOOLS</b>								
<b>3-A.1</b>	Include a provision in charter school agreements that allows for authorizer oversight fees, and develop a cost allocation plan to that supports the fees, which should be charged to charter schools that benefit from the School System's administrative services.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>3-B.1</b>	Move quickly to address problems of low performing schools throughout the district. Charter schools are one tool that can be used to transform school performance.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>3-C.1</b>	Increase communication and sharing of information on effective practices between charter schools and public schools to maximize instructional, administrative and financial resources.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>3-C.2</b>	Encourage communication and collaboration among charter schools to maximize instructional, administrative and financial resources.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>3-D.1</b>	Consider persistently low-performing campuses that are currently underutilized as potential sites for "in-school" charter programs, that is, charters that share a building with a traditional school, and school clusters that currently have campuses at which utilization rates are 100 percent or more as sites for future stand-alone charter schools.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Totals-Chapter 3</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

## Management Response

IMPACT OF CHARTER SCHOOLS ON METROPOLITAN NASHVILLE PUBLIC SCHOOLS

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
Management of Metropolitan Nashville Public Schools should:			
3-A.1	Include a provision in charter school agreements that allows for authorizer oversight fees, and develop a cost allocation plan to that supports the fees, which should be charged to charter schools that benefit from the School System's administrative services.	<p><b>Accept</b> MNPS accepts this recommendation, realizing that agreement of existing charter operators and/or state-level legislation is required to realize this goal. A study of fixed and variable costs associated with adding charter schools is underway. The goal of this work is to produce a list of required services and their costs that all charter schools bear as well as a list of optional services and their costs that charters may choose to purchase on an annual basis. Provided that we reach agreement through this process, the agreed services and costs list will be added to all new or renewal charter agreements approved after July 1, 2015. Provided that we reach agreement through this process, we will also seek approval for the provision to be added to all current charter school agreements by July 2015.</p> <p>MNPS will develop an annual process for selection of optional services, billing for services and required fees, and any other processes required to enable transparent billing and collection procedures.</p>	July 2015
3-B.1	Move quickly to address problems of low performing schools throughout the district. Charter schools are one tool that can be used to transform school performance.	<p><b>Accept</b> MNPS agrees with the urgency in addressing low performing schools and that charter school conversions are one tool that can be used. These conversions should be used as high quality capacity is available, but not rushed beyond that capacity to succeed.</p> <p>The district was the first in the state to use charter school conversion as a plan to address needs of a low-performing school at Cameron Middle. That conversion is now complete and both the charter grades and the MNPS turnaround grade were recognized as Reward schools for their growth in 2013-14. MNPS</p>	July 2015

## Management Response

IMPACT OF CHARTER SCHOOLS ON METROPOLITAN NASHVILLE PUBLIC SCHOOLS

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		<p>included charter school conversion of low-performing schools in its 2014 Call for New Schools, and conversion of Kirkpatrick Elementary (Priority) was approved to begin in the fall of 2015. This model created by MNPS has been adopted by the state's Achievement School District.</p> <p>MNPS will establish a school management system organized around the Academic Performance Framework the district uses to provide both annual snapshots and three-year trend analysis of the balanced academic performance of all district schools. The district will develop an annual action plan for all target and review schools that includes annual notification, parent engagement, and clear communication of potential turnaround actions and timelines to include the potential for charter school conversion in future years.</p> <p>The district has also engaged an external consultant, Mass Insight, to assess and recommend organizational structures that will support this accountability work. Recommendations from this work are due spring 2015.</p>	
3-C.1	<p>Increase communication and sharing of information on effective practices between charter schools and public schools to maximize instructional, administrative and financial resources.</p>	<p><b>Accept</b> Management agrees with this recommendation but notes that the observation of "little" effective communication understates the genuine collaboration and support that exists between district and charter school personnel. Examples include:</p> <ul style="list-style-type: none"> <li>• Public School Collaborative</li> <li>• Benefits Administration Work Group</li> <li>• Shared Services Contracting Work Group</li> <li>• Coding Curriculum and Instruction Partnership (NACS)</li> <li>• Teacher Data and Formative Assessment PD (STEM)</li> <li>• Shared Formative Assessment Creation (Liberty)</li> <li>• Transportation and Conversion Costs Support (LEAD)</li> </ul>	<p>October 2015, ongoing</p>

## Management Response

IMPACT OF CHARTER SCHOOLS ON METROPOLITAN NASHVILLE PUBLIC SCHOOLS

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		<ul style="list-style-type: none"> <li>• Blended Instruction Shared Practices (Rocketship)</li> <li>• School Finder (TCSC, NPEF, MNPS)</li> <li>• Academic Performance Framework</li> <li>• Leadership Development and Mentoring (KIPP)</li> </ul> <p>Nevertheless, greater intentionality and building sustaining structures can only help to ensure that the benefits of collaboration are shared more broadly and make this recommendation well worth accepting.</p>	
3-C.2	Encourage communication and collaboration among charter schools to maximize instructional, administrative and financial resources.	<p><b>Partially Accept</b>            MNPS partially accepts this recommendation and notes it is primarily a charge for charter operators to execute rather than something under the control of district leadership. MNPS again notes that the observation of “little” effective communication understates the genuine collaboration and support that does exist among charter school leaders and other personnel.</p> <p>The Coordinator of Charter Schools regularly convenes groups of charter personnel with similar responsibilities to help spur further collaboration and work to eliminate barriers to collaboration that may arise through interaction with various district departments. Operations personnel meet regularly, and other specific topics draw charter-charter collaboration around transportation, food service, and other. Likewise, the Public Schools Collaborative has established a working group on employee benefits that is exploring ways that charter operators and the district can build better processes to everyone’s benefit.</p> <p>These recommendations would require additional staff of 1.5-2.0 FTE in the charter schools division to establish, lead, and maintain, in addition to the authorizing, reporting, research and oversight</p>	October 2015

## Management Response

IMPACT OF CHARTER SCHOOLS ON METROPOLITAN NASHVILLE PUBLIC SCHOOLS

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		functions already fulfilled by the Charter Office.	
3-D.1	Consider persistently low-performing campuses that are currently underutilized as potential sites for “in-school” charter programs, that is, charters that share a building with a traditional school, and school clusters that currently have campuses at which utilization rates are 100 percent or more as sites for future stand-alone charter schools.	<b>Reject</b> Low-performing schools are addressed in the response to 3-B.1 above. This recommendation aligns with the recommendations in the MGT report that have been incorporated into the current draft of the 2015 Call for New Schools.	N/A

## CHAPTER 4 – HUMAN CAPITAL

### BACKGROUND

In addition to providing a high-quality education for its students, school systems must provide a variety of resources and services to meet student needs. These resources and services include the following:

- teachers to teach;
- counselors to guide;
- nurses to provide health care;
- school administrators to oversee school operations;
- custodians to keep schools clean;
- maintenance staff to keep buildings in good, safe condition;
- police and safety personnel to keep schools safe;
- cooks and servers to provide healthy meals;
- bus drivers to provide transportation;
- finance staff to manage and protect financial resources;
- technology staff to administer and support the technological infrastructure; and
- human capital staff to ensure that employee compensation packages are competitive; qualified employees are recruited, hired and retained; and compliance with labor laws is maintained.

### CHAPTER HIGHLIGHTS

- The School System has many innovative practices to help attract and recruit qualified staff. Additionally, they maintain a pool of qualified applicants to facilitate the hiring process when a vacancy occurs.
- The School System offers their educators higher salaries than the surrounding school systems. When measured against surrounding school systems in 13 teacher and academic salary categories tracked by the state, the School System ranks among the top ten school systems in 9 of the 13 categories.
- The School System's Human Capital Services Department is not structured and functioning optimally to support human capital needs and should align employee activities within the department to report to the appropriate function leader.
- The School System has experienced high teacher turnover rates over the past three school years and should develop a plan to stabilize teacher retention.
- The division of employee benefit plans between Metropolitan Nashville Government for non-certificated (support) staff and the School System for certificated (teaching) staff causes higher cost to the School System and creates an

The School System must offer competitive compensation, benefits, and career path opportunities to attract and retain the best employees. School systems must also have written disciplinary procedures in place when employees do not meet expectations or follow established policies and procedures.

Given the diverse employee needs required to run school systems, it is vital that the Metropolitan Nashville Public Schools System's (the School System) Human Capital Services Department (Human Capital) consist of qualified staff that have been formally trained in human capital management regulations and procedures. Equally critical for effective human capital operations is the presence of documented policies, procedures, and business processes for recruiting, hiring, training, evaluating, and retaining. Additionally, federal employment regulations and labor relations reporting and compliance requirements must be followed.

The School System's Human Capital Services Department's mission statement is as follows:

*"The purpose and direction of the Human Capital Services (HCS) department is to advance the overall mission of MNPS. HCS achieves its mission by providing services that support the District in recruiting, employing, retaining, and developing faculty and staff.*

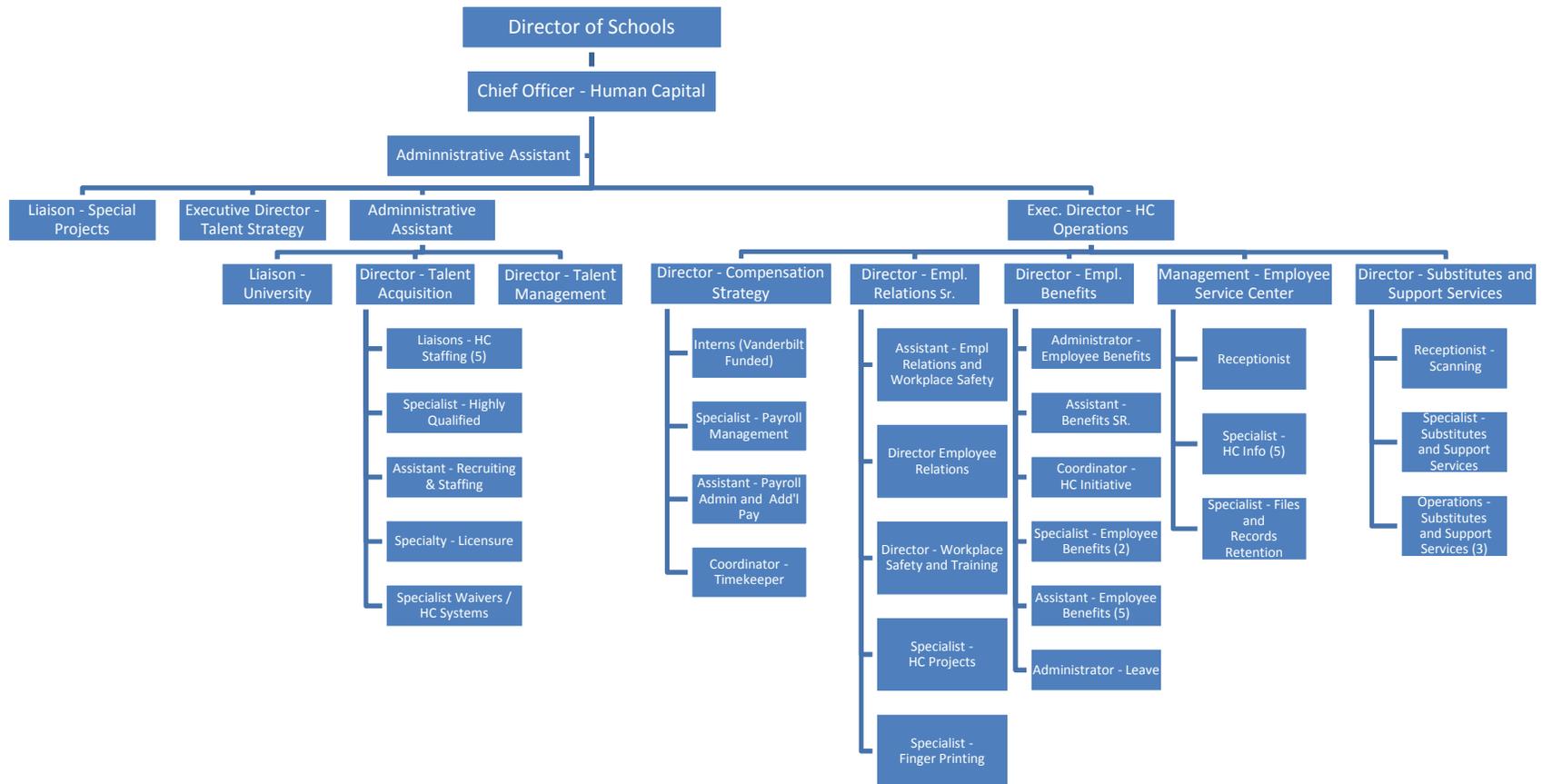
*The focus of HCS is to contribute to the maximization of a high-level of personal and group performance through the provision of a full-range of centralized, comprehensive human capital management services, internal consulting, problem resolution, and benefits that promote the health and productivity of every employee."*

The School System's Human Capital Services Department reports to the director of schools and is staffed with the chief officer of Human Capital and 51 full-time employees plus two administrative assistants. Additionally, Vanderbilt University funds interns assigned to the compensation strategy function. The department is organized into the following three divisions in addition to the chief of Human Capital and the two administrative assistants:

1. special projects & asset – one employee.
2. talent strategy – 13 employees.
3. human capital operations – 37 employees plus Vanderbilt University funded interns.

**Exhibit 4-1** depicts the Human Capital Services Department's organization at the time of the on-site visit for this review.

**Exhibit 4-1**  
**Metropolitan Nashville Public School Human Capital Organization**



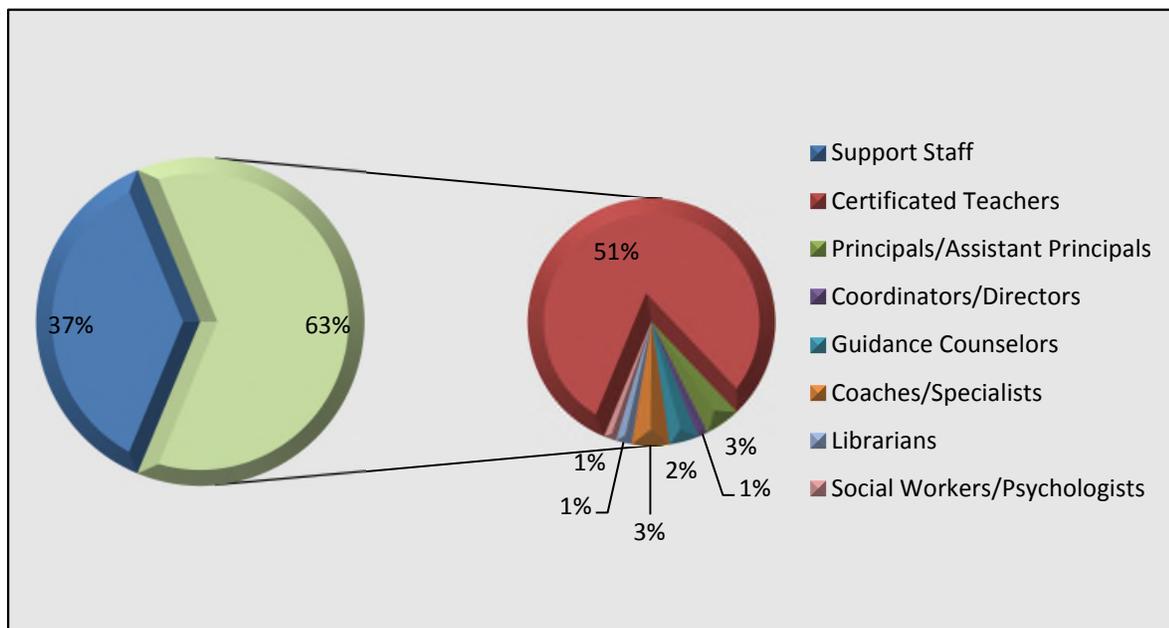
Source: Metropolitan Nashville Public Schools, Human Capital Services Department Organization Chart Last Revised October 30, 2013.

The School System employed 10,120 individuals in 2012-2013 of which the staffing composition was 5,166 teachers, 289 principals & assistant principals, 870 school based staff such as coordinators, counselors and librarians, and 3,795 support staff. The School System classifies employees into two categories:

- certificated staff – employees that are directly involved in education such as teachers, principals, coordinators, counselors, coaches, librarians, social workers and psychologists; and
- non-certificated (support staff) – all employees that are not directly involved with student education such as accountants, food service staff, maintenance and custodial staff, transportation, library clerks, educational assistants and administrative assistants.

In 2012-2013, 63 percent of the School System’s employees were certificated employees and 37 percent were support staff. **Exhibit 4-2** summarizes the School System’s staffing composition for 2012-2013.

**Exhibit 4-2  
Staff Composition  
2012-2013**



Source: 2013-2014 Budget Book, page 25. Second chart totals 62 percent instead of 63 percent due to rounding.

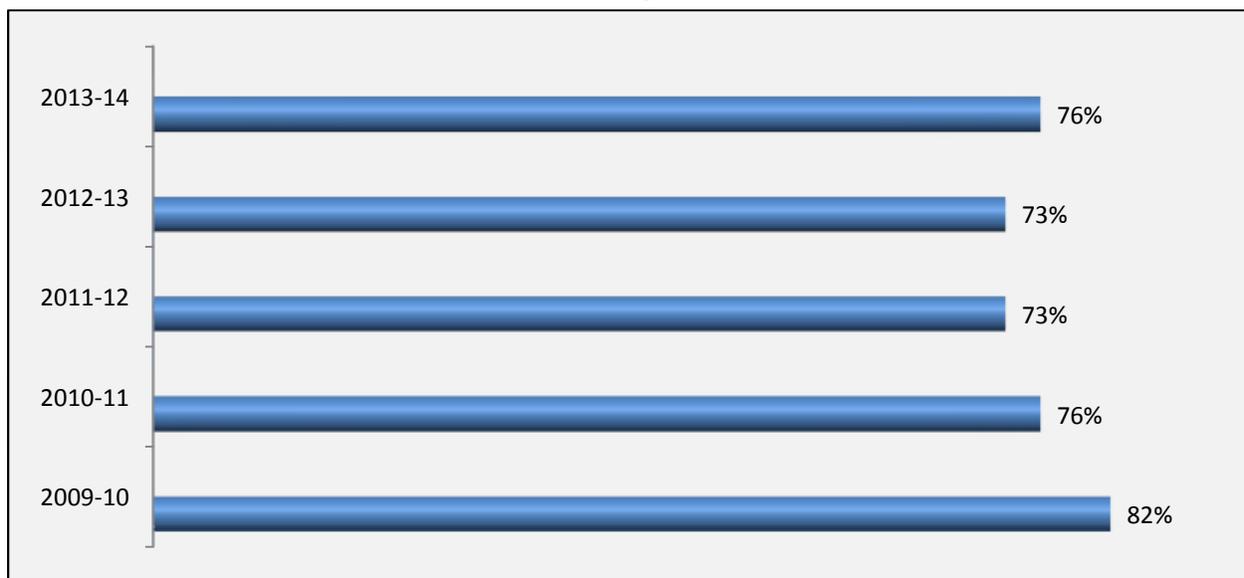
The largest operating expense incurred by school districts is personnel costs. On average, a district’s payroll cost is 75 to 85 percent of its annual operating budget. School districts throughout the United States operate with different sources of revenue, the primary sources being revenues received from state funds followed by local tax dollars and federal funds. Districts place these revenues into their general operating fund.

Another substantial source of funds are grants. Most grant funds are received through the federally-funded government programs such as Title I, Part A, which provides financial assistance to schools with

children from low-income families to help ensure they meet academic standards. In addition, the federal government provides Title 2 funds to prepare, train, and recruit high-quality teachers and principals. School districts maintain grant funds in special revenue accounts that are restricted in their use.

The School System's total budgeted payroll costs as a percentage of total General and Grant fund revenue was 82 percent for 2009-2010. The percentage decreased to 76 percent for 2013-2014. **Exhibit 4-3** summarizes payroll expenditures as a percentage of General and Grant Fund revenue for 2009-2010 through 2013-2014.

**Exhibit 4-3**  
**Budgeted Payroll Costs as a Percentage of General and Grant Fund Revenue**  
**2009-2010 through 2013-2014**

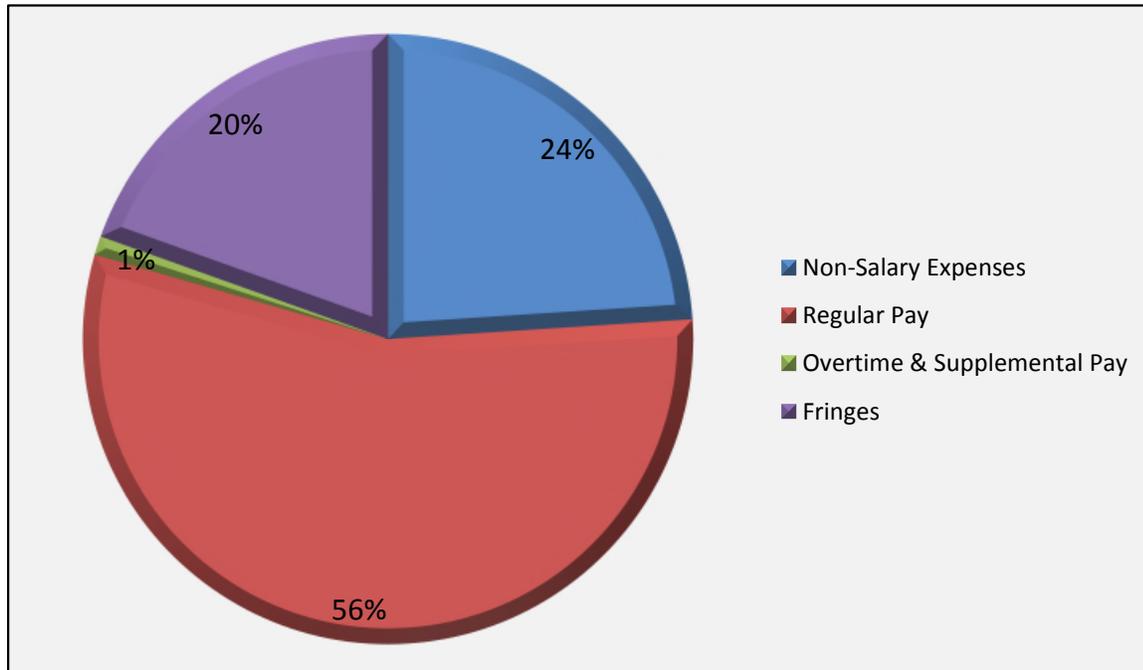


*Source: Compilation from the Metropolitan Nashville Public Schools Budget Book 2013-2014, pages 80 and 82.*

Personnel costs consist of salaries, overtime, supplemental pay for additional duties performed (other salary codes), and fringe benefits. An analysis of the School System's total personnel costs reveal that overtime is less than one percent of General and Grant Fund revenues. This low percentage is one indication that the School System manages overtime effectively.

Salary expenses comprise 56 percent of General and Grant Fund revenues while fringe benefits comprise 20 percent. **Exhibit 4-4** shows the 2013-2014 composition of the School System's expenditures as a percentage of General and Grant Fund revenues.

**Exhibit 4-4  
Expenditure Components  
2013-2014**



Source: Metropolitan Nashville Public Schools Budget Book 2013, pages 80 and 82. Adds to 101 percent due to rounding.

The School System must provide competitive salaries and benefits to attract and retain staff. The Tennessee Education Association consolidates, ranks, and issues reports on Tennessee school district salaries. In the 2012-2013 report, between 92 and 94 school districts reported salaries by degree type. In addition, between 130 and 136 districts reported average salaries by personnel classification. **Exhibit 4-5** summarizes the reported categories and the number of school districts reporting.

**Exhibit 4-5  
Tennessee Education Association School System Ranking Categories and Respondents  
2012-2013**

Category	Number of School Systems Reported
Teachers - Bachelor's Degree Minimum Salary	92
Teachers - Bachelor's Degree Maximum Salary	94
Teachers - Master's Degree Minimum Salary	93
Teachers - Master's Degree Maximum Salary	93
Education Specialist Degree - Minimum	92
Education Specialist Degree - Maximum	94
Doctor's Degree - Minimum	94
Doctor's Degree - Maximum	94
<b>Average Salaries of Classroom Teachers</b>	<b>136</b>

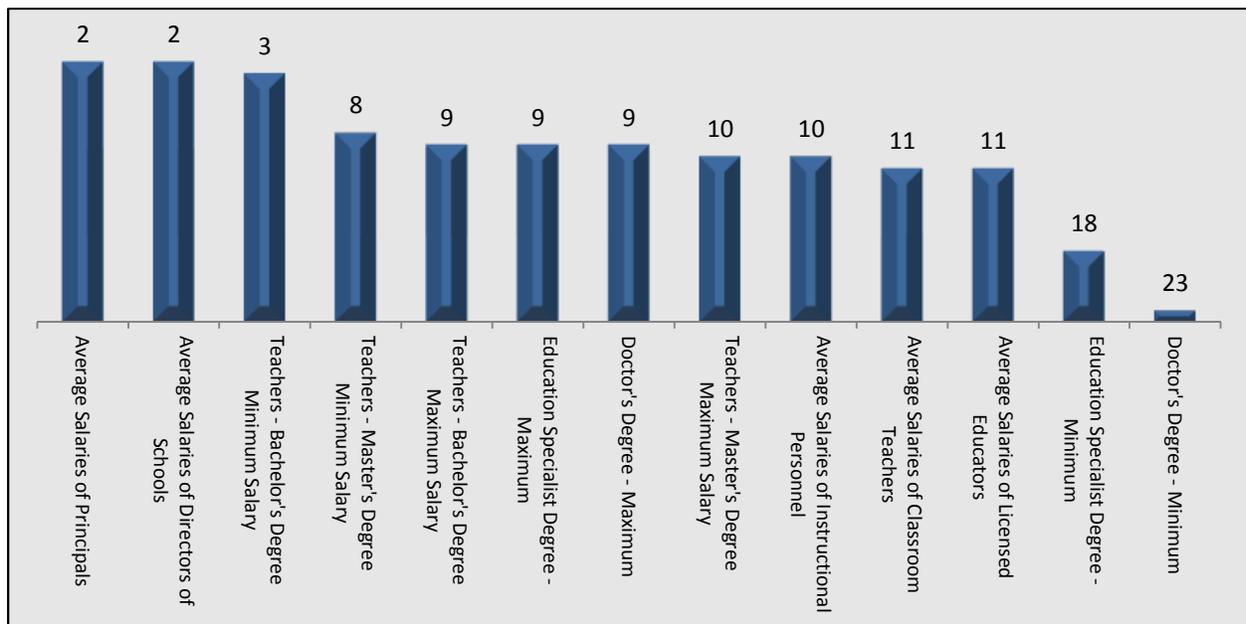
**Exhibit 4-5  
Tennessee Education Association School System Ranking Categories and Respondents  
2012-2013 (Cont'd)**

Category	Number of School Systems Reported
Average Salaries of Instructional Personnel	<b>134</b>
Average Salaries of Licensed Educators	<b>136</b>
Average Salaries of Principals	<b>136</b>
Average Salaries of Directors of Schools	<b>130</b>

*Source: Tennessee Education Association-Tennessee School Systems Profile Rankings, 2012-2013.*

Analysis of the School System's 2012-2013 salaries, compared to other local school districts and the top six counties in Tennessee, reflects that the School's Systems salaries are competitive. The School System's salaries ranked in the top ten - for nine of the 13 salary categories tracked by the state. The two categories where the School System is slightly less competitive are in the minimum education specialist and doctor degree categories. **Exhibit 4-6** presents the School System's salary ranking compared to other systems across the state. The rankings range from 2nd to 23rd place.

**Exhibit 4-6  
Metropolitan Nashville Public Schools Salary Ranking within Tennessee School Systems  
2012-2013**

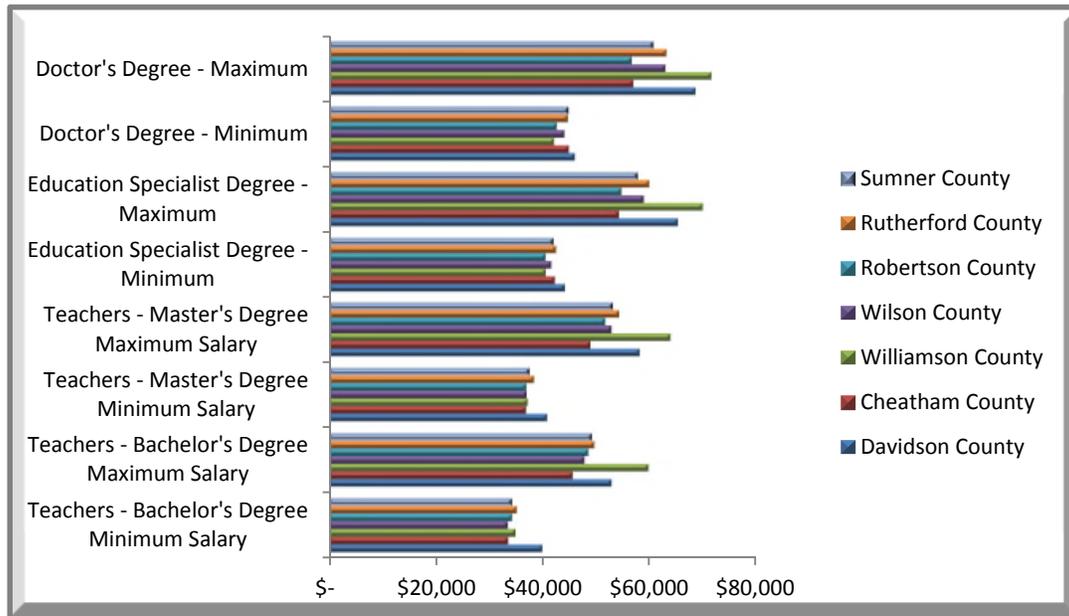


*Source: Tennessee Education Association - Tennessee School Systems Profile Rankings.*

Surrounding communities are usually the top competitors for school system educators. Therefore, it is important for the School System to provide salaries that are comparable within the local area. Comparison of the School System's salaries to those reported for surrounding school systems shows that at the minimum salary for educators with doctor degrees, the minimum for education specialists, the minimum for teachers with masters degrees, and the minimum for teachers with bachelor's degrees, the School System offers their educators higher salaries than the surrounding school systems. In all

other salary categories, the School System ranks second to Williamson County. **Exhibit 4-7** provides a comparison of the School System's salaries, by educational degree, to surrounding school systems.

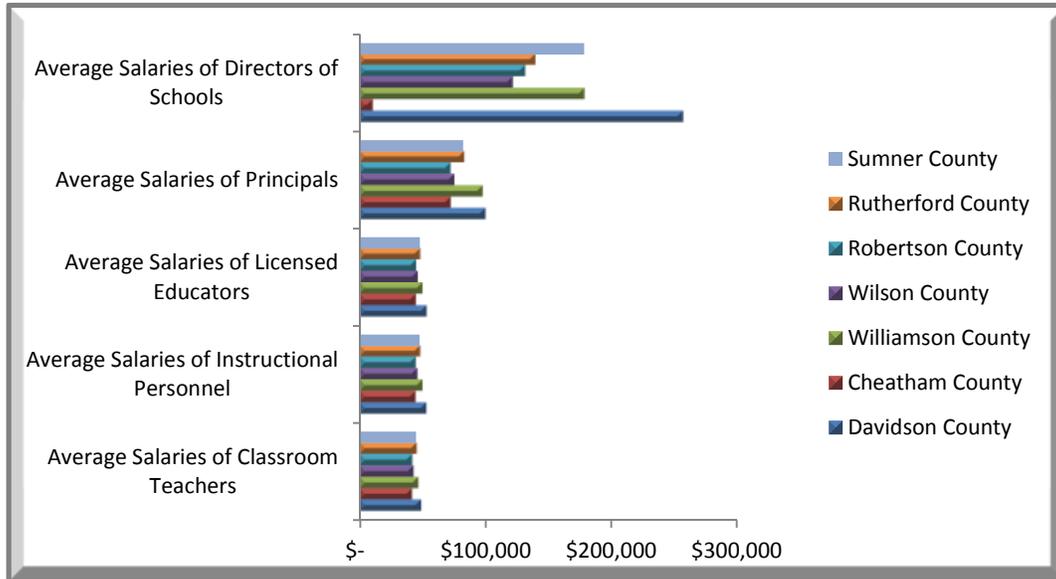
**Exhibit 4-7**  
**School System Salaries by Educational Degree Compared to Local School Systems**  
**2012-2013**



Source: Tennessee Education Association – Tennessee School Systems Profile Rankings, 2012-2013.

When comparing average salaries, the School System is slightly more competitive in all categories as shown in **Exhibit 4-8**.

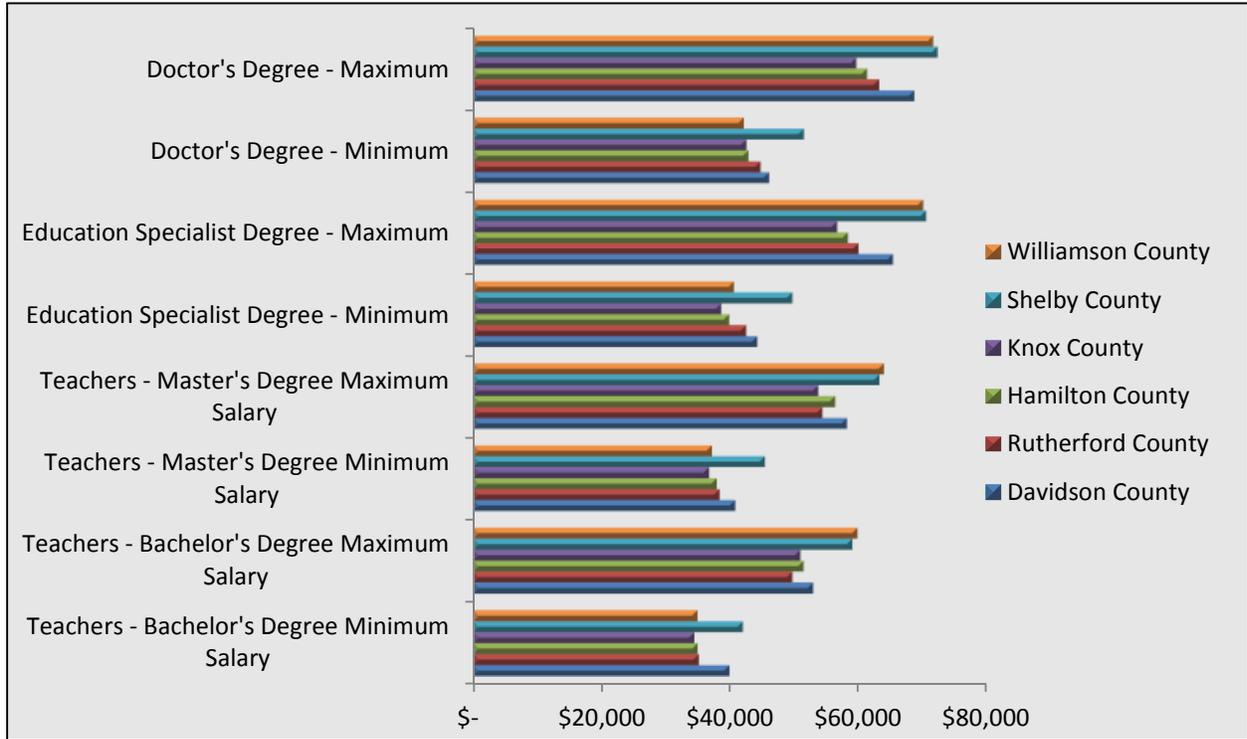
**Exhibit 4-8**  
**School System Average Salaries Compared to Local School Systems**  
**2012-2013**



Source: Tennessee Education Association – Tennessee School Systems Profile Rankings, 2012-2013.

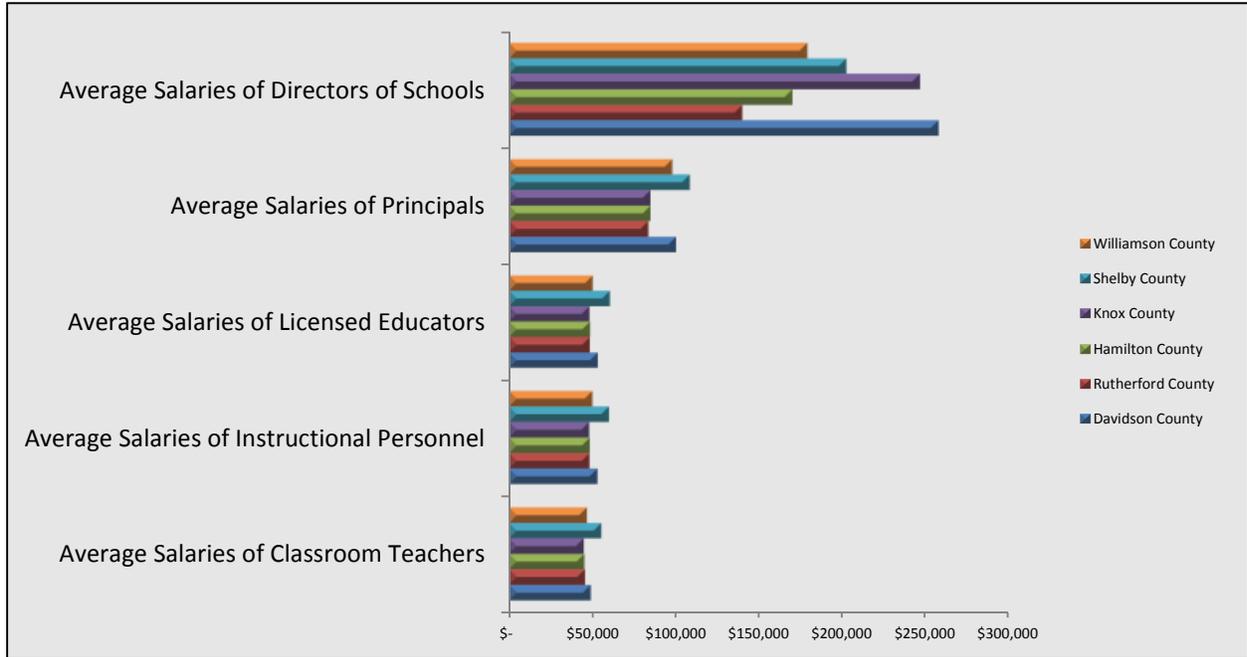
Expanding upon the salary comparisons shows that the School System’s salaries are also competitive with the largest counties in the state. **Exhibits 4-9** and **4-10** provide a comparison of the School System’s salaries to school systems in the largest six counties of the state; Shelby County (Memphis), Davidson County (Nashville), Knox County, Hamilton County (Chattanooga), Rutherford County and Williamson County.

**Exhibit 4-9**  
**Metropolitan Nashville Public Schools Actual Salaries Compared to Largest Tennessee School Systems**  
**2012-2013**



Source: Tennessee Education Association – Tennessee School Systems Profile Rankings, 2012-2013.

**Exhibit 4-10**  
**Metropolitan Nashville Public Schools Salaries Compared to Largest Tennessee School Systems**  
**2012-2013 Actual Salaries**



Source: Tennessee Education Association – Tennessee School Systems Profile Rankings, 2012-2013.

## BEST PRACTICES

Best practices are methods, techniques, or tools that have consistently shown positive results, and can be replicated by other organizations as a standard way of executing work-related activities and processes to create and sustain high performing organizations. When comparing best practices, similarity of entities or organizations is not as critical as it is with benchmarking. In fact, many best practices transcend organizational characteristics.

McConnell Jones Lanier & Murphy LLP (or the review team) identified 17 best practices against which to evaluate the School System’s human capital function. **Exhibit 4-11** provides a summary of these best practices. Best practices that the School System does not meet resulted in observations, which we discuss in the body of the chapter. However, all observations included in this chapter are not necessarily related to a specific best practice and not all best practices met result in an accomplishment.

**Exhibit 4-11**  
**Summary of Best Practices – Human Capital Management**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
1.	The school system conducts a regular survey of market to current salaries and compensation packages to ensure it is competitive to attract and retain employees.	X		The human capital employee responsible for compensation conducts a national survey of market salaries each year then presents the recommended salaries to administration for review, modifications and approval. The ultimate pay increases are dependent upon budget availability and state mandates. <b>See Accomplishment 4-C.</b>

**Exhibit 4-11  
Summary of Best Practices – Human Capital Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
2.	The school system designed a benefit plan that helps achieve the organization's and employee's goals.		X	The School System does have a benefit plan that is aligned with the budget and employee goals. However, because support staff are considered Metropolitan Nashville Government employees they are required to be a part of their benefit plan while certificated employees are on Metropolitan Nashville Public Schools benefit plan. The Metropolitan Nashville Charter requires separate benefit packages for certificated employees. The separate benefit package causes higher cost to the School System and creates a perception of inequity among employees. <b>See Observation 4-C.</b>
3.	The school system has an employee wellness program that is easy to use while promoting the health and well-being of all employees.	X		The School System has established five Family Health Care Centers that are open to all Metropolitan Nashville Public Schools and Metropolitan Nashville Government employees and retired certificated employees. <b>See Accomplishment 4-B.</b>
4.	The school system uses cost-containment practices for its Workers' Compensation Program, which includes procedures to conduct regular inspections of work place facilities to identify and remedy hazardous situations before injuries occur.		X	The School System's Human Capital Services Department has a position dedicated to workplace safety. However, regular inspections are not performed due to understaffing within the workplace safety function. <b>See Observation 4-A.</b>

**Exhibit 4-11**  
**Summary of Best Practices – Human Capital Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
5.	The school system uses automated tools to integrate the on-line job application with the hiring process.	X		The School System does not accept paper employment applications and uses AppliTrack for its on-line job applications. This system is being interfaced with the Human Capital's SharePoint site so that the application and hiring process can be fully automated. <b>See Accomplishment 4-C.</b>
6.	The school system maintains personnel records in an efficient and readily accessible manner.	X		The Human Capital Services Department is in the process of scanning and digitizing all employee files and records. <b>See Accomplishment 4-C.</b>
7.	The school system has procedures in place to ensure personnel files contain all required documentation and then performs regular reviews, updates required documents and purges personnel file contents of unnecessary documents.		X	Personnel file documentation is inconsistent. Some files are missing required documents and may also include extraneous or old documents that are not required to be maintained. <b>See Observation 4-D.</b>
8.	The school system maintains a user-friendly web-page where employees can access human capital information.	X		The Human Capital web-pages are up-to-date and easy to navigate through. Policies, benefit information, frequently asked questions, and contacts are provided on the web-pages. <b>See Accomplishment 4-C.</b>
9.	The school system publishes an updated comprehensive employee handbook each year.	X		The employee handbook is updated on an annual basis and published electronically for all employees to access.

**Exhibit 4-11  
Summary of Best Practices – Human Capital Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
10.	The school system publishes human capital policies on-line.	X		The Human Capital web-pages contain updated human capital policies.
11.	The school system efficiently and effectively recruits and hires qualified instructional and non-instructional personnel.	X		The School System has many innovative practices to help attract and recruit qualified staff. Additionally, they maintain a pool of qualified applicants to facilitate the hiring process when a vacancy occurs. <b>See Accomplishment 4-A.</b>
12.	To the extent possible given factors outside the School System's control, they strive to maintain a reasonably stable work force and a satisfying work environment by addressing factors that contribute to increased turnover or low employee morale.		X	The School System has high teacher turnover. <b>See Observation 4-B.</b>
13.	The school system provides a comprehensive staff development program to improve student achievement and to achieve and maintain high levels of productivity and employee performance among non-instructional, instructional, and administrative employees.	X		The Human Capital Services Department's talent management function works in conjunction with the School System's executive director of Secondary Instruction to identify training and development needs then develop training sessions to meet those needs.

**Exhibit 4-11  
Summary of Best Practices – Human Capital Management (Cont’d)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
14.	The school system’s process for formally evaluating employees improves and rewards excellent performance and productivity, and identifies and addresses performance that does not meet the School System’s expectations for the employee.	X		The School System has adopted the state’s performance evaluation system that rewards performance. The evaluation system also identifies low performance.
15.	The school system’s human capital program is managed effectively and efficiently.		X	Some human capital functions are not performing efficiently. <b>See Observation 4-A.</b>
16.	The school system has established programs to ensure that new teachers receive the support and guidance they need to maximize their chances for success.	X		The School System has a new teacher mentoring system and also provides extensive staff development tailored towards new teachers.
17.	Processes are in place to gain an understanding of the district’s staffing needs and develop recruiting and retention strategies to meet those needs.	X		The Human Capital Service Department’s talent acquisition function is responsible for working with principals and administrators to identify their staffing needs and the recruiting of qualified staff to fulfill those needs. <b>See Accomplishment 4-A.</b>

Source: McConnell Jones Lanier & Murphy LLP Review Team.

## ACCOMPLISHMENTS

### ACCOMPLISHMENT 4-A

**The Human Capital Services Department has developed an innovative and effective plan for recruiting staff.**

The School System's Human Capital Services Department has a function dedicated to talent acquisition. The function reports to the executive director of talent strategy and is staffed with 13 employees, including the executive director of Talent Strategy, a director of talent acquisition and two federally funded positions. The talent acquisition function is responsible for working with principals and administrators to identify their needs. They are also responsible for recruiting qualified staff in addition to facilitating the hiring process, reviewing and monitoring licensures and waivers, orientating new employees, and providing services to employees once they are hired. The talent acquisition function uses the following innovative strategies to recruit employees:

- **Social Media** – Facebook Page, the School System's Talent Twitter, LinkedIn Page, and Job Search sites such as Indeed and Simply Hired;
- **Community/University Partnerships** – These are used to conduct information sessions; build relationships with colleges; participate in career fairs in the community; assist colleges with mock interviews for students; and collaborate with universities on student teacher placement;
- **Diversity Recruitment** – The School System also targets recruitment at Historically Black Colleges and Universities (HBCU); partners with Teach for America (TFA) and The New Teacher Project (TNTP); participates in job fairs in Puerto Rico; and cultivates candidates through network of alumni;
- **Virtual Recruitment/Interviews** – The School System has an internal system that allows principals/hiring managers to conduct virtual interviews and provide answers to questions for candidates through virtual means;
- **Internships** – The School System collaborates with Vanderbilt's Owen School of Business to introduce students to the School System through internships;
- **Maintain a Pre-screened Applicant Pool** – Human Capital liaisons pre-screen applicants to reduce hiring time for principals;
- **Employment Branding** – The School System updates their branding with new imagery; ensures all recruiting materials reflect employment brand; and refreshes the Human Capital website on a regular basis; and
- **AppliTrack System** – The School System utilizes a user friendly applicant tracking system and generates approximately 6,000 candidates each year from this system.

**ACCOMPLISHMENT 4-B**

**The School System provides healthcare centers for its employees as part of the employee wellness program.**

The School System has established five Family Healthcare Centers. The five centers are strategically located throughout the School System for easy access by employees and are run by an independent company, University Community Health Services, which is a partnership with Vanderbilt School of Nursing and Vanderbilt Medical Center. The Family Healthcare Centers are available to all School System employees, Metropolitan Nashville Government employees and their dependents, and the School System's certificated retirees and their dependents.

The Family Healthcare Centers have the capability to serve as the primary care doctor for employees. Nurse practitioners work under the supervision of a clinic's physician medical director. Each nurse practitioner has experience in primary care, family practice, and women's health. Same day appointments are available for acute illnesses and minor injuries. Nurse practitioners are available to assist patients who have previously been seen in the clinic by phone 24 hours a day, 7 days a week.

The clinic visit is provided at no cost to employees enrolled in the School System's Certificated Employees Health Plan. For employees who are not enrolled in the School System's Certificated Employees Health Plan, other insurance carriers can be billed and the employee's co-payment is waived.

**ACCOMPLISHMENT 4-C**

**The Human Capital Services Department has taken measures to improve operations.**

The Human Capital Services Department is in the process of implementing initiatives to enhance employee services and address concerns raised in previous reviews. Examples of these initiatives include the following:

- **Electronic Records** – A project has been underway for slightly more than one year to scan and digitize all human capital records, including employee files. Once fully implemented, this initiative will allow Human Capital to reduce paper and have all records electronically available to department staff;
- **SharePoint** – The Human Capital Services Department is working with a third-party to develop a comprehensive SharePoint site to be used for all employee related transactions. At the time of this review, the SharePoint site was significantly completed. This site is intended to be used by all School System staff in their interactions with Human Capital staff. Principals and department managers will initiate job vacancy and hiring requests, which will be linked to their respective budgets and then the School System's on-line employment application system. Employees can submit vacation and retirement requests. Ultimately, full implementation of the SharePoint site will lead to stronger controls and customer service efficiencies;

- **AppliTrack** – The Human Capital Services Department implemented a new electronic applicant tracking system for posting job opportunities. The goal is to eventually have this system communicate with SharePoint to reduce the need to manually enter employee data;
- **Tennessee Educator Acceleration Model (TEAM)** – The School System implemented the state’s new teacher evaluation system, which includes teacher observations, educator self-scoring, growth measures for student performance on state assessments, student achievement measures, student opinion surveys, and professionalism;
- **Strategic Compensation** – The School System is beginning the process of implementing a pay for performance compensation plan. This plan will ensure conformance with the state’s salary requirements;
- **Dedicated Compensation Position** – The department had assigned one full-time position to perform compensation analysis, salary studies, and job description updates to ensure that these crucial activities are performed in a timely and consistent manner;
- **Salary Schedules** – The School System has simplified salary schedules that are easy to maintain and administer. There are four distinct salary schedules that are designed according to the general employment characteristics of each functional group, degrees required or held, number of months worked, or educational level. These schedules are updated annually based on market surveys performed by the employee responsible for compensation;
  - **administrative employees** – This salary schedule applies to principals, assistant principals, and executive directors. The salary schedule for principals and assistant principals is based upon degree type, steps and number of months worked each year. The annual salary ranges from \$66,650 to \$115,481 plus the longevity payment of \$1,330. The salary schedule for executive directors is based upon steps. The monthly salary for this group of employees ranges from \$1,492 to \$2,028.
  - **certificated employees** – This salary schedule is based upon degree type and years of experience. The annual salary ranges from \$32,810 to \$69,570;
  - **support staff** – This salary schedule is a matrix that contains 16 grades and 25 steps. The minimum hourly wage is \$10.26 per hour and the maximum is \$68.76 per hour;
  - **substitute employees** – This simplified schedule contains 4 levels and pay is based on the individual’s education level. The minimum hourly wage is \$9.76 per hour and the maximum is \$11.16 per hour.
- **Kronos Time-Keeping System** – The department is beginning the process of using this web-based time and attendance system to help ensure accurate recording of time worked. The Human Capital Services Department payroll function has been working with Metropolitan Nashville Government to install and implement the Kronos time-keeping system. Once fully implemented, all employees will be required to use electronic cards to record their time and attendance. This information automatically updates payroll records to increase efficiencies and accuracy.

## DETAILED OBSERVATIONS

### HUMAN CAPITAL OPERATIONS

#### OBSERVATION 4-A

**The School System's Human Capital Services Department is not optimally structured and functioning to support the system's human capital needs.**

At the time of this review, the School System's Human Capital Services Department was implementing various initiatives to become more responsive to its customer's needs. However, there does not appear to be one overarching project plan to guide the process and monitor status. Additionally, School System administrators and principals do not have an understanding of changes being made within human capital operations. The department also reorganized some staff positions and was planning to reorganize additional positions while this review was in progress. While the intent has been to improve operations, these actions have had the opposite effect on Human Capital Services Department staff morale and some delays in processing human capital transactions;

Examples of human capital operations are not optimally structured and functioning includes the following:

- review of the Human Capital Services Department's organization chart, which consists of 53 staff positions plus the chief officer and Vanderbilt University funded interns, gives the impression that the department might be overstaffed. However, given the workload associated with the high teacher turnover noted in an observation 4-B, the department is not overstaffed, it is not optimally organized. The chief officer recognizes that the department needs to be better organized and continues to take measures to place people in appropriate functions;
- staff reporting relationships are not aligned with the function they report to although the department recently reorganized. For example, the organization chart shows that two staff administrative members report to the workplace safety director. However, the individuals are responsible for document scanning and records maintenance and do not have involvement in work place safety activities;
- the workplace safety function is understaffed. The director of Workplace Safety is responsible for submitting worker's compensation claims to the third-party administrator, monitoring employee return to work status, providing workplace safety training, and performing district facility safety inspections. Because all these functions are assigned to one person, full safety inspections of School System facilities are not conducted regularly, workplace safety training is limited, and there is a backlog of return to work status reviews'
- human capital's staffing liaisons are assigned to School System employees based on the employee's last name instead of having responsibility for entire schools, departments, or types of employees. While this type of arrangement is good for cross-training purposes, it does not promote efficient customer service. School and department administrators and their assistants do not have one point of contact for all of their employees. Instead, they must determine which

human capital employee is responsible for the employee that needs to be served and then make the contact; and

- the Human Capital Services Department's offices and staff are not suitably located to provide effective and efficient communications and operations. Staff within the department are located in offices that are on two different floors in the main administrative building due to the building's space and layout constraints. The Benefits Department was located in a separate building at the time of our site visit; however, there was a plan to move this department into the main building. This separation of offices results in a geographically fragmented department, which requires additional effort to ensure effective communication as employees visit multiple offices for service.

#### **RECOMMENDATION 4-A.1**

##### **Develop a comprehensive project plan to capture, monitor, and in all report Human Capital Services Department initiatives.**

The chief officer of Human Capital should work with staff to develop one comprehensive project plan that captures all individual initiatives that are in-progress and planned for the Human Capital Services Department. This plan should include regular monitoring and reporting of activities and assigned responsibilities and timelines. Furthermore, the project plan should be shared with human capital staff and communicated to School System administrators so they have a better understanding of changes being made.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

#### **RECOMMENDATION 4-A.2**

##### **Align employee activities within the department to report to the appropriate function leader.**

The chief officer of Human Capital should ensure that all employees are performing tasks outlined in their job description and that they are reporting to the manager responsible for the respective functions being performed.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

#### **RECOMMENDATION 4-A.3**

##### **Assign additional staff to perform workplace safety functions.**

The chief officer of Human Capital should assign at least two additional staff members to perform workplace safety tasks such as conducting regular safety inspections at schools and system facilities and assisting in the monitoring of worker's compensation claims and the timely filing of associated records.

**FISCAL IMPACT**

This recommendation can be implemented with existing resources.

**RECOMMENDATION 4-A.4****Consider assigning employee service center staff workloads based on schools and departments.**

The chief officer of Human Capital should reassess the change in workload distribution of employee service center staff from employee last name to schools and departments. Assigning workloads based on schools and departments will provide less human capital points of contact required for administrators, principals, department heads, and administrative assistants to address their needs.

**FISCAL IMPACT**

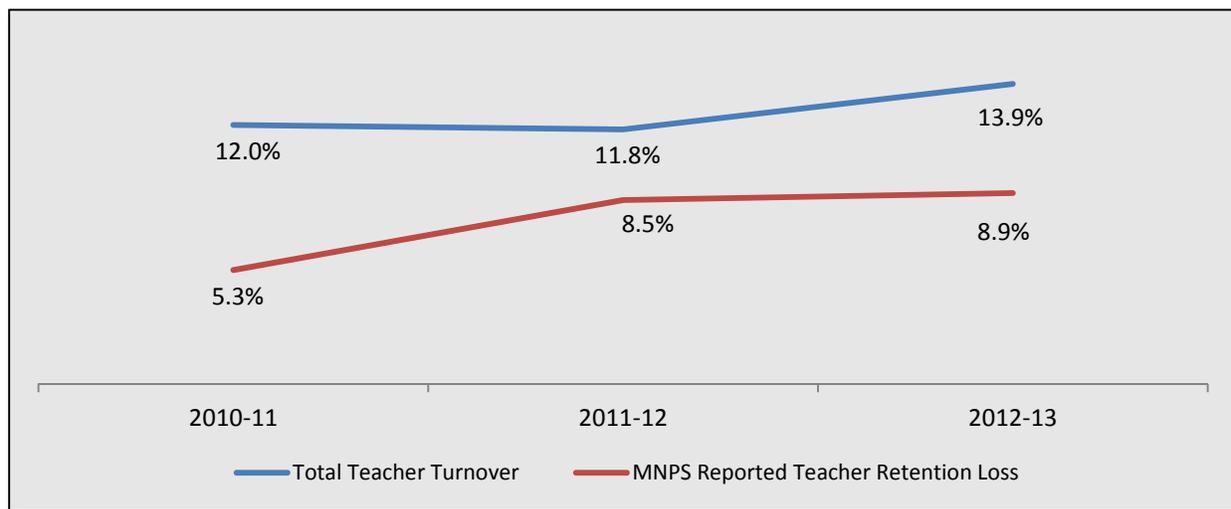
This recommendation can be implemented with existing resources.

**TEACHER TURNOVER****OBSERVATION 4-B****While teacher stability is a key component of providing students with a quality education, the School System has experienced high teacher turnover rates over the past three school years.**

The School System's Human Capital Services Department monitors teacher retention; however, it includes resignations in its formula rather than all teacher separations. Actual teacher turnover has increased from 12 percent in 2010-2011 to 13.9 percent in 2012-2013 compared to the 5.3 percent teacher retention loss rate reported in 2010-2011 and 8.9 percent reported for 2012-2013.

**Exhibit 4-12** provides a comparison of the Human Capital Service Department's calculated teacher retention loss to the review teams calculations of teacher turnover based on all teacher separations.

**Exhibit 4-12  
Teacher Turnover Rates - 2010-2011 thru 2012-2013**



Source: *The Metropolitan Nashville Public Schools Teacher Turnover Rate File, January 2014.*

High teacher turnover increases staff workloads as documents must be processed for teachers who leave and the hiring process begins. Newly hired teachers must receive orientation and enroll in the proper benefits plans.

**Exhibit 4-13** presents a summary of teacher hires and separations for 2010-2011 through 2012-2013. During this three year period, the School System hired 677 teachers while 2,094 teachers left the system for various reasons.

**Exhibit 4-13  
The School System's Teacher Employment Activity  
2010-2011 Thru 2012-2013**

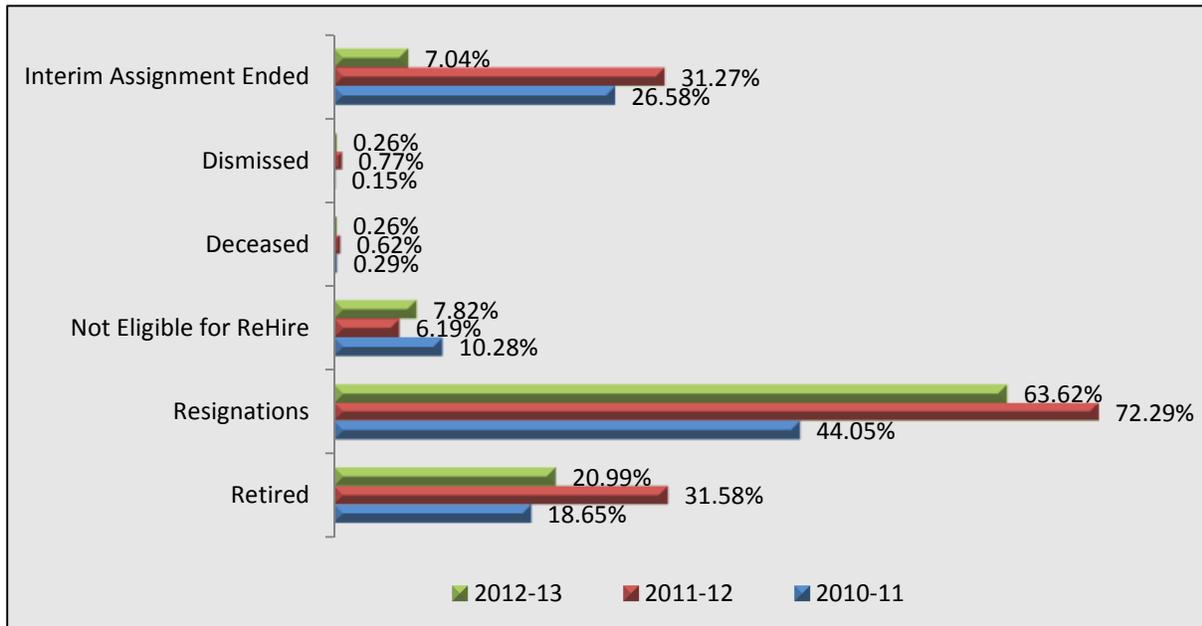
School Year	Total Separations	New Hires	Total Classroom Teachers	Percent New Teachers
2010-2011	681	181	5,671	3%
2011-2012	646	231	5,475	4%
2012-2013	767	265	5,510	5%
<b>Total</b>	<b>2,094</b>	<b>677</b>		

Source: *The Metropolitan Nashville Public Schools Teacher Turnover Rate File, January 2014.*

Effective human capital departments analyze reasons for employee separations so that appropriate corrective action can be taken. **Exhibit 4-14** summarizes teacher separation reasons from 2010-2011 through 2012-2013. Sixty-four percent of 2012-2013 teacher separations were due to resignations while an additional 21 percent were due to retirements. The high number of resignations and retirements could be attributed to changes that the School System was implementing to address poor student academic performance and the anticipated required implementation of pay for performance being

incorporated into the state of Tennessee’s new teacher evaluation system. There are many questions and a lack of trust for this new system.

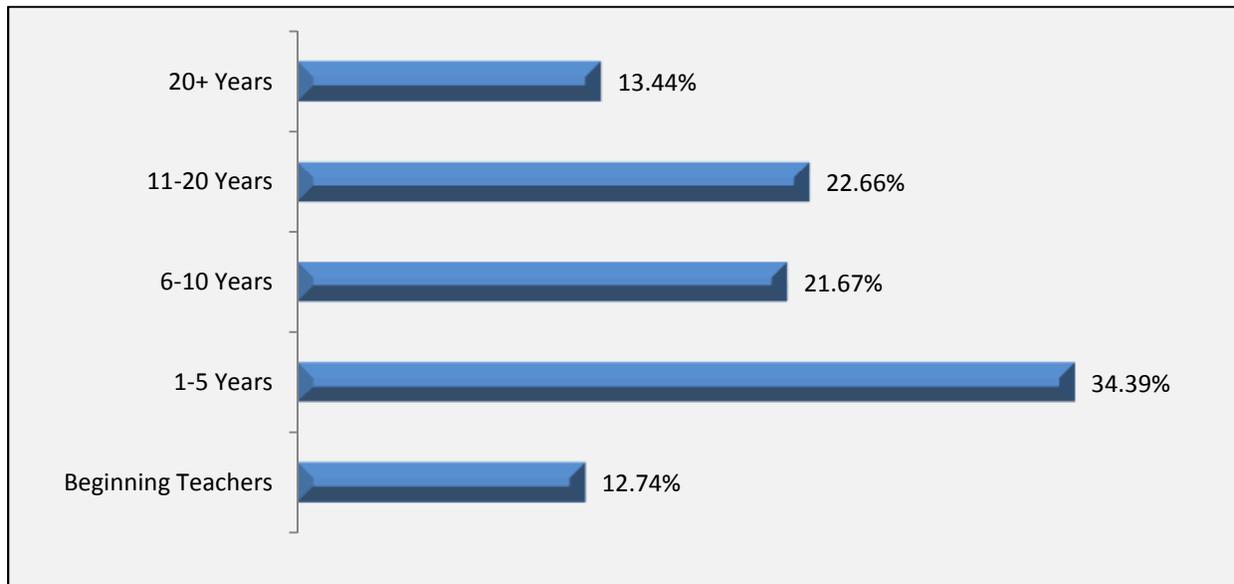
**Exhibit 4-14  
The School System’s Teacher Separation Reasons**



Source: *The Metropolitan Nashville Public Schools Teacher Turnover Rate File, January 2014.*

The consequence of high teacher turnover is that the School System now has a high percentage of teachers with minimal teaching experience. While the benefit of newer teachers is lower salaries, fresh ideas, and new teaching concepts in the classroom, these benefits are sometimes outweighed by the additional resources required to mentor, train, and support new teachers in their effort to manage a safe classroom and educate children successfully. **Exhibit 4-15** shows that 47 percent of the School System’s teachers had five or less years of teaching experience.

**Exhibit 4-15**  
**Teacher Years of Experience, 2013-2014**



Source: *The Metropolitan Nashville Public Schools Teacher Years of Experience File, January 2014.*

#### **RECOMMENDATION 4-B.1**

##### **Include all reasons for teacher separation in the teacher retention calculation.**

The chief officer of Human Capital should instruct appropriate staff to include all teacher separation reasons in the teacher retention calculation to obtain an accurate determination of teacher turnover.

#### **FISCAL IMPACT**

This recommendation can be implemented with current resources.

#### **RECOMMENDATION 4-B.2**

##### **Develop a plan to stabilize teacher retention.**

The chief officer of Human Capital should work with the director of schools and chief academic officer to determine what the target teacher retention rates should be and what action should be taken when retention falls below targeted rates. The plan should also include monitoring and reporting activities and it should assign responsibilities for all activities.

#### **FISCAL IMPACT**

This recommendation can be implemented with current resources.

## **EMPLOYEE BENEFIT PLANS**

### **OBSERVATION 4-C**

**The division of employee benefit plans between Metropolitan Nashville Government for non-certificated (support) staff and the School System for certificated (teaching) staff causes higher cost to the School System and creates an atmosphere of inequity among employees.**

Furthermore, Metropolitan Nashville Public Schools does not have representation or voting privileges on the Metropolitan Employee Benefit Board although their active employee participation represents approximately 28 percent of the population and the decision made have a significant impact on their budget and staff.

There are significant differences between the two plans in terms of costs incurred by the School System. Employees also perceive the School System's benefits to be significantly better than those provided by the Metropolitan Nashville Government. Employee benefits include healthcare and retirement.

The School System is a component of Metropolitan Nashville Government. As such, the School System receives some human capital-related support services such as payroll processing, legal support, and employee benefits. The Metropolitan Employee Benefit Board manages the retirement benefit plans for all Metropolitan and School System employees except those that are in the teacher's pension system. These benefits are managed by the School System's Insurance Trust. **Exhibit 4-16** summarizes employee benefit plan responsibilities.

**Exhibit 4-16  
School System Employee Retirement and Healthcare Benefit Plan Responsibilities**

<b>Employee Classification</b>	<b>Employees Included in Classification</b>	<b>Applicable Employee Retirement Benefit Plan</b>	<b>Employee Benefit Plan Management Oversight</b>
Certificated	<ul style="list-style-type: none"> <li>• Teachers</li> <li>• Principals</li> <li>• Assistant Principals</li> <li>• Counselors</li> <li>• Coaches</li> </ul>	<ul style="list-style-type: none"> <li>• Tennessee Consolidated Retirement System</li> <li>• Metropolitan Nashville Public Schools Teacher Pension</li> </ul>	<ul style="list-style-type: none"> <li>• Tennessee Department of Treasury through the Tennessee Consolidated Retirement System Board of Trustees</li> <li>• Metropolitan Nashville Public Schools Professional Employees Insurance Trust</li> </ul>
Non-Certificated	<ul style="list-style-type: none"> <li>• Administrators</li> <li>• Administrative Assistants</li> <li>• Bus Drivers</li> <li>• Custodians</li> <li>• Food Service Workers</li> <li>• Finance Staff</li> <li>• Groundskeepers</li> <li>• Human Capital Staff</li> <li>• Maintenance Workers</li> <li>• Purchasing Staff</li> </ul>	<ul style="list-style-type: none"> <li>• Metropolitan Government of Nashville and Davidson County</li> </ul>	<ul style="list-style-type: none"> <li>• Metropolitan Employee Benefit Board</li> </ul>

Source: *The Metropolitan Nashville Public Schools Teacher Turnover Rate File, January 2014.*

In a defined benefit plan, future retirement benefits are determined by a benefit formula rather than an account balance. Conversely, defined contribution plan benefits are based on amounts credited to an individual employee's accounts by the employee, their employer, and investment earnings on the accumulated funds. Vested contributions to the account are guaranteed but not earnings, which fluctuate on the basis of investment performance.

The Tennessee Consolidated Retirement System is a defined benefit pension plan that covers state employees, higher education employees, K-12 public school teachers, and employees of political subdivisions who have elected to participate in the plan. The State of Tennessee Public Chapter NO. 259 Senate Bill NO. 1005 section (8) defines a state employee as any person who is employed in the service of and whose compensation is paid by the state or in whole or in part from federal or other funds.

Tennessee legislation created a new hybrid pension plan for state employees and K-12 teachers hired on or after July 1, 2014. Local governments also have the option to adopt the new hybrid pension plan with cost controls. Highlights of the hybrid plan include:

- defined benefit plan plus defined contribution plan;
- controls to limit employer cost and unfunded liability;
- applies to all new hire state, K-12 teacher, and higher education employees subject to FLSA hired on or after July 1, 2014;
- defined benefit component plan provides 1.0 percent annual service accrual multiplier;
- employer contributes 4 percent of payroll to defined benefit component; 5 percent of payroll to defined contribution component for aggregate employer contribution of 9 percent; and
- employee contributes 5 percent of payroll to defined benefit component; auto enrolled for 2 percent of payroll contribution to defined contribution component, but may opt out of defined contribution for the employee contribution.

The Schools System's director of employee benefits performed a cost benefit analysis in June 2013 and prepared a proposal for the chief financial officer to consider. This proposal was shared with the director of finance for Metropolitan Nashville Government; however, it had not been acted upon at the time of this review although cost savings had been identified. The School System pays a total of 9 percent of an eligible employee's annual salary towards retirement benefits if the employee is considered certificated while non-certificated employees on the Metropolitan Nashville Government's retirement system receive a 17.11 percent contribution, a difference of more than 8 percent. **Exhibit 4-17** compares the percentage paid by the School System towards eligible employee retirement benefits.

**Exhibit 4-17  
Comparison of Employee Benefit Contributions  
2013-2014**

	Defined Benefit	Defined Contribution
Metropolitan Nashville Public Schools Contributes for Teacher	4% target	5%
Teacher Contributes	5%	2% (may opt out or alter)
Metropolitan Nashville Public Schools Contributes for Support	17.11%	N/A
Support Employee Contributes	0%	N/A

Source: *The Metropolitan Nashville Public Schools Director of Employee Benefits, March, 2014.*

Applying the different retirement benefit rates to an employee with an average annual salary of \$17,500 would result in a six-year cost of \$16,475 for a non-certificated employee and \$9,450 for a certificated employee; a savings of \$7,025. **Exhibit 4-18** shows the cost comparison calculations performed for the June 2013 proposal.

Metro Nashville General Government Retirement Plan costs are 17.117 percent of pay after completion of 6 months of service. The Tennessee Consolidated Retirement System costs are 9.00 percent of pay upon date of hire. Turnover is not considered but would have the same effect on both the Metro Nashville General Government Retirement Plan and Tennessee Consolidated Retirement System costs. If average employment stay is 6 years with annual pay of \$17,500, the average plan costs are illustrated in **Exhibit 4-18**.

**Exhibit 4-18  
Comparison of Employee Benefit Costs  
Metro Nashville General Government Retirement Plan  
versus Tennessee Consolidated Retirement System-2011-2012**

	Metro Nashville General Government Retirement Plan	Tennessee Consolidated Retirement System
Contribution Rate	17.117%	9.000%
Average Pay	\$17,500	\$17,500
Years to Contribute	5.5	6.0
<b>Total Expected Contributions</b>	<b>\$16,475</b>	<b>\$9,450</b>

Source: *The Metropolitan Nashville Public Schools Director of Employee Benefits, March, 2014.*

Employee healthcare plans are more diverse and result in different premiums since they are based on the options, the number of participants, employee demographics, and claims history. The School System pays \$11,700 for annual healthcare benefits per eligible non-certificated employee through the

Metropolitan Nashville Government and \$8,000 per certificated employee through the School System’s healthcare plan. **Exhibit 4-19** compares the healthcare benefit costs for eligible certificated and non-certificated employees.

**Exhibit 4-19  
Comparison of Healthcare Benefits Rates, 2013-2014**

Benefit	Non-Certificated Employees (Support Staff)		Certificated Employees (Teaching Staff)	
	Special Fund Rates*	Notes/Comments	Special Fund Rates*	Notes/Comments
Group Health	\$11,000	Rate depends on plan (provider and coverage). Rates change January 1st.	\$8,000	Rate depends on plan (provider and coverage). Rates change July 1st.
Dental	\$500	Rate depends on plan (provider and coverage). Rates change January 1st.	Included with Group Health Rates	
Life	\$200	Rate depends on plan (provider and coverage). Rates change January 1st.	Included with Group Health Rates	
<b>Total</b>	<b>\$11,700</b>		<b>\$8,000</b>	

*Source: The Metropolitan Nashville Public Schools employee benefit rate used for budgeting file provide via SharePoint (HC32) January 2014.*

Because healthcare insurance rates are dependent upon the number of participants, their demographics, and claims incurred, any savings realized by the School System may actually increase costs to Metropolitan Nashville Government. Moreover, additional staffing may be required to administer all employee benefit plans that are currently being handled by Metropolitan Nashville Government.

#### **RECOMMENDATION 4-C.1**

**Establish a task force to determine projected cost savings, benefits, and implications of all School System employees being covered under the School System’s employee benefit plan for health and retirement benefits.**

The task force should be comprised of the human capital directors, the benefits directors, and the chief financial officers of the School System and Metropolitan Nashville Government. Analysis should also include any staffing implications associated with managing the various benefit plans. If it is determined that the employee healthcare and retirement benefit plans for non-certificated employees will remain with Metropolitan Nashville Government, efforts should be made to make the healthcare and retirement benefit plans as equitable as possible between all employees. The chief officer of Human Capital should ensure that appropriate communications are provided to all employees to explain the differences between the two plans and the reasoning behind the differences.

## FISCAL IMPACT

This recommendation can be implemented with current resources. However, benefits are controlled at the state and metropolitan general council therefore any changes would need their approval. The ultimate goal is to remove employee perception of inequality and save costs.

## COMPENSATION

### OBSERVATION 4-D

**Although the School System's salaries are competitive compared to surrounding school systems, the compensation studies performed by the School System's Human Capital Services Department do not include surrounding communities.**

The Human Capital Services Department's compensation specialist conducts informal salary studies each year to determine market competitiveness for certain School System positions. However, these studies include larger urban school systems across the country and do not include surrounding school systems and larger school systems in Tennessee.

Formal compensation studies that identify all components of the employee compensation structure, including salaries and benefits, and compares position job duties in addition to titles serve as the foundation to effectively monitor employee compensation and ensure market competitiveness to attract and retain employees.

The Tennessee Education Association collects, compiles and reports salary information for educational staff. As discussed in this chapter's introduction, the School System's salaries for educational staff are among the highest in the state and the neighboring communities. The Tennessee Education Association does not report on support staff salaries. Therefore, the review team conducted an informal salary survey of support staff to determine the competitiveness of the School System's salaries to larger school systems in Tennessee and the surrounding communities.

Responses received were not consistent as some school systems provided hourly wages, some school systems provided average annual salaries with no number of days worked, and other school systems did not provide all of the requested information. In order to analyze salaries between the school systems clearer data must be obtained. However, for the purpose of gaining an understanding of how the School System compares to other school systems, the information that we were able to obtain allows for a high-level, rough assessment.

Based on comparing the data provided and obtained through school system web sites, the School System's salaries are competitive with the exception of bus drivers (See **Exhibit 4-22**). Compensation is considered comparative to market if the respective salary is within 10 percentage points of the competitor's. As **Exhibit 4-20** demonstrates, School System support staff salaries are more than 100 percent of the peer average for all support staff director positions. The School System's support staff director salaries are therefore competitive based on the data provided.

**Exhibit 4-20  
Support Staff Director Salaries Comparisons**

School System	Central Office Administration	Technology	Security/Police	Food Service	Transportation	Maintenance
Wilson County**	\$ 0	\$ 64,944	\$ 59,492	\$ 61,487	\$ 53,347	\$ 54,947
Sumner County*	\$ 85,000	\$ 70,000	\$ 0	\$ 0	\$ 70,000	\$ 70,000
Shelby County	\$ 117,092	\$ 103,624	\$ 120,504	\$ 114,000	\$ 108,848	\$ 107,768
Knox County	\$ 78,521	\$ 78,521	\$ 78,521	\$ 78,521	\$ 78,491	\$ 78,521

**Exhibit 4-20  
Support Staff Director Salaries Comparisons (Cont'd)**

School System	Central Office Administration	Technology	Security/Police	Food Service	Transportation	Maintenance
Williamson County	\$ 0	\$ 98,000	\$ 60,600	\$ 82,500	\$ 82,500	\$ 85,000
<b>Metropolitan Nashville Public Schools</b>	<b>\$ 104,452</b>	<b>\$ 109,524</b>	<b>\$ 107,269</b>	<b>\$ 108,739</b>	<b>\$ 122,745</b>	<b>\$ 115,867</b>
<b>Peer Average excluding Metropolitan Nashville Public Schools</b>	<b>\$ 93,538</b>	<b>\$ 83,018</b>	<b>\$ 79,779</b>	<b>\$ 84,127</b>	<b>\$ 78,637</b>	<b>\$ 79,247</b>
<b>Metropolitan Nashville Public Schools Percentage of Average</b>	<b>112%</b>	<b>132%</b>	<b>134%</b>	<b>129%</b>	<b>156%</b>	<b>146%</b>

Source: Informal Salary Survey Responses July 2014 and Published Salary Schedules

\* Sumner County reported their low salaries for maintenance manager and teacher aide positions where others reported average salaries

\*\* Calculated based on the published salary schedules

**Exhibit 4-21** provides a comparison of support staff manager salaries. From reviewing the survey responses, it seems that Shelby County salaries are consistently higher than other counties, including the School System. With the exception of Shelby County, the School System's staff manager salaries are competitive to others in Tennessee.

**Exhibit 4-21  
Support Staff Manager Salaries Comparisons**

School System	Central Office Administration	Professional Support	Technology	Security/Police	Food Service	Transportation	Maintenance
Wilson County**	\$ 32.97	\$ 0.00	\$ 34.87	\$ 22.24	\$ 14.19	\$ 22.24	\$ 17.44
Sumner County*	\$ 24.04	\$ 0.00	\$ 21.63	\$ 0.00	\$ 12.25	\$ 12.95	\$ 14.80
Shelby County	\$ 43.81	\$ 44.45	\$ 39.81	\$ 44.49	\$ 44.19	\$ 43.41	\$ 40.05
Knox County	\$ 30.88	\$ 30.88	\$ 30.88	\$ 30.88	\$ 11.71	\$ 30.88	\$ 16.69
Williamson County	\$ 21.05	\$ 20.91	\$ 30.96	\$ 0.00	\$ 16.23	\$ 28.45	\$ 13.15
<b>Metropolitan Nashville Public Schools</b>	<b>\$ 36.41</b>	<b>\$ 30.87</b>	<b>\$ 37.74</b>	<b>34.83</b>	<b>\$ 24.18</b>	<b>\$ 34.49</b>	<b>\$ 26.33</b>

**Exhibit 4-21  
Support Staff Manager Salaries Comparisons (Cont'd)**

School System	Central Office Administration	Professional Support	Technology	Security/Police	Food Service	Transportation Bus Drivers	Maintenance
<b>Peer Average excluding Metropolitan Nashville Public Schools</b>	\$ 30.55	\$ 32.08	\$ 31.63	\$ 32.54	\$ 19.71	\$ 27.59	\$ 20.43
<b>Metropolitan Nashville Public Schools Percentage of Average</b>	119%	96%	119%	143%	123%	125%	129%

Source: Informal Salary Survey Responses July 2014 and Published Salary Schedules

\* Sumner County reported their low salaries for maintenance manager and teacher aide positions where others reported average salaries

\*\* Calculated based on the published salary schedules

**Exhibit 4-22** provides a comparison of support staff salaries. From reviewing the survey responses it seems that out of eight categories, Shelby County support staff salaries are higher in four. Of the remaining four categories, Knox County support staff salaries are higher in two and the School System's support staff salaries are higher in two. When comparing the overall peer average, excluding Metropolitan Nashville Public Schools, the School System is less competitive in two categories: Professional Support and Transportation (bus drivers).

**Exhibit 4-22  
Support Staff Salaries Comparisons**

School System	Central Office Administration	Professional Support	Technology	Teacher Aids/Paraprofessional	Security/Police	Food Service	Transportation	Maintenance
Wilson County**	\$ 16.44	\$ 15.20	\$ 22.23	\$ 11.67	\$ 0.	\$ 11.17	\$ 16.46	\$ 15.36
Sumner County*	\$ 0.00	\$ 0.00	\$ 14.42	\$ 7.30	\$ 0.	\$ 7.45	\$ 12.18	\$ 14.42
Shelby County	\$ 23.61	\$ 31.62	\$ 25.17	\$ 13.81	\$ 14.	\$ 16.75	\$ 13.96	\$ 20.80
Knox County	\$ 13.10	\$ 13.10	\$ 19.33	\$ 14.40	\$ 15.	\$ 11.32	\$ 19.33	\$ 11.91
Williamson County	\$ 12.82	\$ 17.34	\$ 21.23	\$ 10.23	\$ 0.	\$ 11.16	\$ 17.19	\$ 11.99
<b>Metropolitan Nashville Public Schools</b>	\$ 22.72	\$ 15.01	\$ 32.98	\$ 13.49	\$ 19.	\$ 12.04	\$ 12.58	\$ 16.28
Peer Average excluding Metropolitan Nashville Public Schools	\$ 16.49	\$ 19.32	\$ 20.48	\$ 11.48	\$ 15.	\$ 11.57	\$ 15.82	\$ 14.90
<b>Metropolitan Nashville Public Schools Percentage of Average</b>	138%	78%	161%	118%	130%	104%	80%	109%

Source: Informal Salary Survey Responses July 2014 and Published Salary Schedules

\* Sumner County reported their low salaries for maintenance manager and teacher aide positions where others reported average salaries

\*\* Calculated based on the published salary schedules

**RECOMMENDATION 4-D.1****Conduct formal compensation studies on a regular basis to ensure market competitiveness.**

The compensation specialist should conduct a formal compensation study at least once every five years to ensure that the School System's total employee compensation by position is competitive to the markets. The compensation study should incorporate information from large school systems in Tennessee and surrounding communities as these are the markets that are competing for the same individuals as the School System. The compensation study should include job duties, titles and benefits. Annual compensation should then be based on results of the compensation study analysis.

**FISCAL IMPACT**

This recommendation can be implemented with existing resources.

**PERSONNEL FILES****OBSERVATION 4-E****Contents of personnel folders are not standardized, and personnel file contents are not consistent.**

At the time of our site visit, the School System was in the process of implementing an electronic filing system whereby each personnel folder had to be hand touched in order to scan the contents. This would have been an excellent time to standardize the contents of all personnel folders.

We reviewed selected personnel files in the Human Capital Services Department noting that the contents were not consistent. Some folders contained miscellaneous items such as copies of emails, handwritten notes from formal observations, and miscellaneous memos. Other folders did not contain essential personnel information such as the following:

- driver's License;
- copy of Social Security Card;
- i-9 Form (hired after 1986);
- transcript; and
- record of Criminal History Check Being Performed (hired after 2001).

Metropolitan Nashville Public Schools Human Capital is in the process of checking the Department of Children Services, Metropolitan Nashville Courts, and Abuse Registry for all employees hired prior to May 1, 2014.

The lack of established standardized personnel file contents and adherence to standards makes it difficult to maintain accurate and consistent records to document compliance with federal, state, and local laws, and regulations. Maintaining accurate records can also reduce exposure to litigation, protect employees, improve processing efficiency, and serve the needs of the School System.

**RECOMMENDATION 4-E.1****Develop and implement a checklist to standardize the contents of personnel folders.**

The chief officer of Human Capital and the executive director of Human Capital Services operations should develop a checklist to be used to ensure that every personnel file contains the required documentation for all positions and then specific documents that may be required for their position type. For example, teachers need to have a valid teacher's certificate in addition to social security cards, driver's license, transcripts, and so on. Additionally, procedures should be developed to include generating a monthly report that lists new hires. This report should be given to the designated human capital manager along with the associated personnel files for review before filing. Notices should be sent to any employee whose file is incomplete.

**FISCAL IMPACT**

This recommendation can be implemented with current resources.

**RECOMMENDATION 4-E.2****Require Human Capital staff to use the checklist.**

The executive director of Human Capital operations should require all human capital staff to use the established personnel file checklist when compiling and updating employee files.

**FISCAL IMPACT**

This recommendation can be implemented with current resources.

**RECOMMENDATION 4-E.3****Purge electronic folders to remove extraneous documents.**

The executive director of the Human Capital Services Department should initiate a project to review all electronic files, compare contents to the established checklist and purge documents that are determined as not needed.

**FISCAL IMPACT**

This recommendation can be implemented with current resources.

**RECOMMENDATION 4-E.4****Determine which required documents are missing from active employee files then obtain the documents and add to the electronic folders.**

The executive director of the Human Capital Services Department should initiate a project to review all electronic files, compare contents to the established checklist and obtain required documents that are

determined to be missing. These documents should then be scanned and attached to the respective electronic personnel file.

**FISCAL IMPACT**

This recommendation can be implemented with current resources.

## ALTERNATIVE SOURCING AND LEVERAGING OPPORTUNITIES

### **LEVERAGING METROPOLITAN NASHVILLE GOVERNMENT**

The School System's the Human Capital Services Department leverages Metropolitan Nashville Government resources for payroll processing. The School System's the Human Capital Services Department has staff dedicated to reviewing timekeeping entered at each school and assisting in resolving employee payroll issues. Metropolitan Nashville Government generates the payroll and issues employee paychecks through direct deposit or paper checks.

Some school systems have recently started outsourcing teacher substitutes to a national temporary staffing agency. Research of reasons for pursuing this option include the School System's inability to source qualified individuals and the level of effort required to track teacher absences and process substitute teacher payroll. The School System's Human Capital Services Department does not face these challenges as they have an automated teacher substitute system that reduces the need for dedicated substitute teacher staffing activities, tracks teacher absences and generates reports. They also have a sound substitute training program and have a teacher absence fill rate of 92 percent in the 2012-2013 school year. Because of the School Systems' Human Capital success in their substitute teacher program we do not recommend outsourcing this function at this time.

**FISCAL IMPACT SUMMARY**

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 4: HUMAN CAPITAL</b>								
4-A.1	Develop a comprehensive project plan to capture, monitor, and report in all Human Capital Services Department initiatives.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4-A.2	Align employee activities within the department to report to the appropriate function leader.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4-A.3	Assign additional staff to performing workplace safety functions.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4-A.4	Consider assigning employee service center staff workloads based on schools and departments.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4-B.1	Include all reasons for teacher separation in the teacher retention calculation.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4-B.2	Develop a plan to stabilize teacher retention.	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**FISCAL IMPACT SUMMARY (Cont'd)**

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 4: HUMAN CAPITAL</b>								
4-C.1	Establish a task force to determine projected cost savings, benefits, and implications of all School System employees being covered under the School System's employee benefit plan for health and retirement benefits.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4-D.1	Conduct formal compensation studies on a regular basis to ensure market competitiveness	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4-E.1	Develop and implement a checklist to standardize the contents of personnel folders.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4-E.2	Require Human Capital staff to use the checklist.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4-E.3	Purge electronic folders to remove extraneous documents.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4-E.4	Determine which required documents are missing from active employee files then obtain the documents and add to the electronic folders.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTALS-CHAPTER 4</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

## Management Response

HUMAN CAPITAL

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
Management of Metropolitan Nashville Public Schools should:			
4-A.1.	Develop a comprehensive project plan to capture, monitor, and report in all Human Capital Services Department initiatives.	<b>Accept</b> The MNPS Human Capital Department will utilize a project manager to plan the comprehensive initiatives within the division.	April 2015
4-A.2	Align employee activities within the department to report to the appropriate function leader.	<b>Partially Accept</b> Human Capital has realigned the employee service center personnel to HC Tier Partners.	December 2014
4-A.3	Assign additional staff to performing workplace safety functions.	<b>Partially Accept</b> Human Capital is considering the realignment of staff assignments to support the workplace safety functions.	December 2014
4-A.4	Consider assigning employee service center staff workloads based on schools and departments.	<b>Accept</b> Human Capital has realigned the employee service center personnel to HC Tier Partners.	December 2014
4-B.1	Include all reasons for teacher separation in the teacher retention calculation.	<b>Accept</b> Human Capital is in the process of developing a strategic retention plan for teachers and support staff. The plan will include an assessment of threats to retention of high quality staff, action steps to address those threats, and metrics to measure progress.	February 2015
4-B.2	Develop a plan to stabilize teacher retention.	<b>Accept</b> Human Capital is engaging principals to begin developing a comprehensive, multi-year retention plan for the district's high performing teachers. The plan will be developed throughout the spring, 2015, and will be implemented in summer 2015-16.	September 2015
4-C.1	Establish a task force to determine projected cost savings, benefits, and implications of all School System employees being covered under the School System's employee benefit plan for health and retirement benefits.	<b>Partially Accept</b> MNPS understands this recommendation would have to be led by Metro Government.	TBD
4-D.1	Conduct formal compensation studies on a regular basis to	<b>Accept</b>	July 2015

## Management Response

HUMAN CAPITAL

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
	ensure market competitiveness.	The job description for the compensation position in Human Capital requires regular studies of market competitiveness.	
4-E.1	Develop and implement a checklist to standardize the contents of personnel folders.	<b>Accept</b> Human Capital has implemented a checklist to standardize personnel folders.	October 2014
4-E.2	Require Human Capital staff to use the checklist.	<b>Accept</b> Human Capital has implemented a process to ensure all Human Capital staff connected with new hire files follow the checklist protocol established within 4-E.1.	October 2014
4-E.3	Purge electronic folders to remove extraneous documents.	<b>Partially Accept</b> Human Capital does not have current resources necessary to review and redact 14,000 employee files of possible extraneous documents. The department did review and redact files prior to the files being digitally scanned and has implemented a process that ensures any extraneous documents to an employee file are removed at the time a file is requested due to open records requirements or transfer to Metro Legal.	TBD
4-E.4	Determine which required documents are missing from active employee files then obtain the documents and add to the electronic folders.	<b>Partially Accept</b> Human Capital does not have current resources necessary to review and determine which required documents are missing from active employee files, obtain the documents and add to the electronic folders of 14,000 employee files.  The department has implemented a process to ensure all Human Capital staff connected with new hire files follow the checklist protocol established within 4-E.1. Human Capital has implemented a process to obtain required documents that are missing from active employee files and add those documents to the electronic employee file when a file is requested due to open records requirements or transfer to Metro Legal.	TBD

## CHAPTER 5 – FINANCIAL MANAGEMENT

### BACKGROUND

Sound financial management enables school districts to meet the challenge of satisfying the dual demands of educating America's children while balancing financial resources. Sound financial management ensures that school districts receive and secure all available revenues; make sound financial decisions; develop and monitor budgets; establish strong internal controls; issue timely, accurate, and relevant financial reports; and comply with internal policies and procedures as well as external laws and regulations.

Metropolitan Nashville Public Schools (the School System) receives financial resources from state, federal, and local sources. The primary state funding source comes through the Tennessee Department of Education. The Tennessee Department of Education appropriates funds for K-12 education through the Basic Education Program funding formula, which provides a per student allotment to the School System.

The state considers allocations determined by the Basic Education Program funding formula to be sufficient to provide a basic level of education for Tennessee students. This basic level of funding includes both a state and local share of the Basic Education Program.

The Basic Education Program has three major categories (instruction, classroom, and non-classroom), each made up of separate components related to the basic needs of students, teachers, and administrators within a school system. Average daily membership (student enrollment) is the primary driver of funds generated by the Basic Education Program.

Funds generated by the Basic Education Program are divided into state and local shares for each of the three major categories (instructional, classroom, non-classroom). The state and local share for each school system is based on an equalization formula that is applied to the Basic Education Program. This equalization formula is the primary factor in determining how much of the Basic Education Program is supported by the state versus the local district.

The equalization formula is driven primarily by property values and sales tax, applied at a county level. For example, the state and local equalization shares for County System A would be the exact same state and local shares for City System A, within the same county. All local school systems are free to raise additional education dollars beyond the funds generated by the Basic Education Program.

### CHAPTER HIGHLIGHTS

- The School System's use of Metropolitan Nashville Government's online eBid system is an effective and profitable means of selling surplus property.
- For the past five years, the School System has received the Association of School Business Officials International Meritorious Budget Award for excellence in budget presentation.
- Risk-based audit approaches would optimize internal school fund audit resources and schedules while adding audit outcomes to principal evaluations would enhance the value and importance of school fund audits.
- Prepaid business credit cards offer a more efficient means of distributing Basic Education Program funds to teachers to purchase supplies.
- Configuring the Web Requisition system for use by charter schools would enhance their procurement process by enabling them to initiate electronic purchase orders.

Federal dollars are provided through programs such as No Child Left Behind, Individuals with Disabilities Act, the Title I Program, and the National School Lunch Act and Child Nutrition Act. The bulk of local funds come from property and sales taxes. The School System does not have taxing authority and is dependent upon the county government for property and local option sale tax revenues.

The total 2013-2014 revenue budget is projected to be \$734,420,300, which includes \$12,000,000 in fund balance. Of the \$734,420,300, excluding fund balance, property tax revenues of \$285,203,000 comprise nearly 39 percent followed by state and other government revenues of \$256,191,700, which comprises 35 percent. Basic Education Program revenue is \$252,545,000 for 2013-2014. Local option sales taxes for 2013-2014 are projected to be nearly 25 percent of the revenue budget, or \$181,737,500.

In addition to operating revenue, the 2013- 2014 budget consists of child nutrition funds totaling \$42,058,900 and funds from federal sources totaling \$84,598,000.

The School System's 2013-2014 operating expenditure budget totals \$746,420,300 of which 71 percent (\$527,031,800) goes to provide educational instruction. The second highest expenditure is for plant operations, which comprises 8 percent (\$63,114,400) of the operating budget. In addition, each year a higher percentage of the School System's budget is allocated to fund charter schools. The 2013-2014 charter school allocation was \$36,454,500, which is projected to increase to \$50,096,500 during 2014-2015.

In addition to its operating budget, the School System incurs expenditures for child nutrition and capital projects. The 2013-2014 child nutrition budget totaled \$42,058,900 and consisted primarily of personnel and food costs, which comprised approximately 51 percent (\$21,616,600) and 32 percent (\$13,621,600) of the total child nutrition budget, respectively.

The capital budget is made up of a six-year list of projects approved annually by the board of education. The School System's approved capital project budget is included with capital budgets of other Metropolitan Nashville Government agencies and submitted to the mayor and Metropolitan Council for review and approval. Capital funds actually provided to the school district depend upon the city's needs and bonding capacity. If funds are provided, the School System prioritizes the capital projects list and funds individual projects accordingly. For 2013-2014, the capital project appropriation totaled \$95,000,000.

The school board designates a finance committee each year to oversee the budget process. The finance committee delegates responsibility for the planning, development, implementation and monitoring of the budget to School System administration.

The Budgeting and Financial Reporting Department distributes general instructions for preparing the budget and provides specific line-item instructions for certain budget items to each department head. This information aids departments in preparing their individual requests.

Departments start the budget process by reviewing the district’s mission and goals, which drive the programs and services offered. By focusing on a clearly defined mission and measurable concrete goals departments can ensure that budget requests match the needs of the students served. Each department sets its priorities for the coming budget year. These priorities may be new programs or services, or new targets for existing programs and services. After departments have submitted their budget priorities, the director of schools and the executive staff review the requests to ensure consistency with the School System’s goals and priorities.

The budget process begins in December with review of the strategic plan and discussions related to the strategic plan and improving student achievement. Budget goals are linked to the strategic plan. Budget discussions and deliberations continue through March. A proposed budget is submitted to the mayor in April. In May, the budget is presented to the Metropolitan Nashville Council. On or before June 30, Metropolitan Nashville Council passes the budget ordinances, which the mayor signs into law.

Once the budget is approved by Metropolitan Nashville Council, the budget documents are housed with the director of Budgeting and Financial Reporting under the direct supervision of the chief financial officer. The Budgeting and Financial Reporting Department monitors departmental budgets and prepares monthly reports for the chief financial officer. The school board and Metro Council must approve budget amendments that change the final appropriation amount.

Responsibilities for the financial management of the School System are divided between Metropolitan Nashville Government and the School System as shown in **Exhibit 5-1**.

**Exhibit 5-1  
Division of Financial Management Responsibilities**

<b>Financial Management Function</b>	<b>Performed by Metropolitan Nashville Public Schools</b>	<b>Performed by Metropolitan Nashville Government</b>
Operations	<ul style="list-style-type: none"> <li>• Accounts Payable</li> <li>• Accounts Receivable</li> <li>• General Ledger</li> <li>• Payroll</li> <li>• Deposits</li> <li>• Grant Accounting</li> <li>• Purchasing</li> </ul>	<ul style="list-style-type: none"> <li>• Maintains accounting and payroll systems</li> <li>• Issues accounts payable and payroll checks</li> <li>• Maintains check stock</li> <li>• Maintains vendor master file</li> </ul>
Treasury and Cash Management	n/a	<ul style="list-style-type: none"> <li>• Maintains investments</li> <li>• Maintains depository relationship</li> </ul>
Fixed Assets	<ul style="list-style-type: none"> <li>• Identifies, records, and tags fixed assets</li> <li>• Coordinates fixed assets inventory</li> <li>• Maintains recorded accountability</li> </ul>	<ul style="list-style-type: none"> <li>• Provides fixed asset tags</li> <li>• Maintains fixed asset system</li> </ul>
Budget	<ul style="list-style-type: none"> <li>• Develops and manages annual School System budget</li> </ul>	<ul style="list-style-type: none"> <li>• Reviews, approves, incorporates into city budget through ordinance for city council</li> </ul>
Reporting	<ul style="list-style-type: none"> <li>• Operational monthly reporting</li> </ul>	<ul style="list-style-type: none"> <li>• Preparation of Comprehensive Annual Financial Report</li> </ul>
External Audit	<ul style="list-style-type: none"> <li>• Provides information and assistance with selected internal school fund audits</li> </ul>	<ul style="list-style-type: none"> <li>• Coordinates with external auditors and manages annual audits</li> </ul>

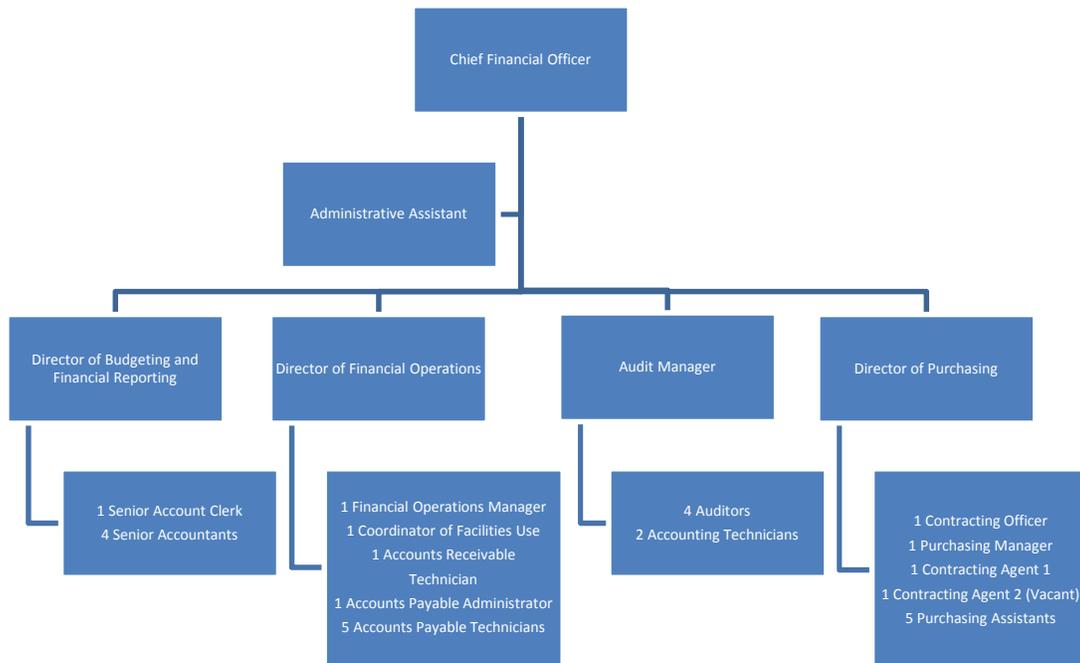
**Exhibit 5-1  
Division of Financial Management Responsibilities (Cont'd)**

Financial Management Function	Performed by Metropolitan Nashville Public Schools	Performed by Metropolitan Nashville Government
Internal Audit	<ul style="list-style-type: none"> <li>Conduct internal school fund reviews and audits</li> <li>Train and support school bookkeepers</li> </ul>	<ul style="list-style-type: none"> <li>Assurance services as approved by the Metropolitan Nashville Audit Committee</li> </ul>
Accounting Software	<ul style="list-style-type: none"> <li>Makes entries</li> <li>Provides supporting documentation to Metropolitan Nashville Public Schools</li> </ul>	<ul style="list-style-type: none"> <li>Manage features of software</li> <li>Approve entries to post</li> </ul>

Source: Director of Budgeting and Financial Reporting, February 2014

The School System's financial management functions are housed in the Office of Chief Financial Officer under the direction of the chief financial officer. In addition to financial management and internal audit functions, the chief financial officer also oversees facility and grounds maintenance, facility planning and construction, and facility services. Financial management functions under the chief financial officer's oversight include budgeting and financial reporting, financial operations (accounts payable), purchasing, and internal school fund audits. The chief financial officer has an administrative assistant and four finance-related direct reports who are supported by 29 staff positions. **Exhibit 5-2** presents the organization of the Office of Chief Financial Officer exclusive of the nonfinancial components.

**Exhibit 5-2  
Office of Chief Financial Officer Organization**



Source: Metropolitan Nashville Public Schools

The 2013-2014 budget for the Chief Financial Officer Organization was approximately \$3,000,000. This amount is less than one-half of one percent of the School System General Fund budget. Each position in the Chief Financial Officer's Organization supports 302 district staff and 2,473 students at a cost of \$92,012 per employee in the finance organization. These numbers are favorable in comparison to the three school districts that responded to the peer survey and is an indication that the Chief Financial Officer's Organization is rightly staffed. However, these results are somewhat expected given that Metropolitan Nashville Government performs some finance and accounting-related functions on behalf of the School System.

In comparison to the peers, the School System has the lowest finance to district budget ratio and supports more district staff per finance employee. Moreover, it is second highest to Duval County Schools in terms of the number of students supported per finance employee. Additionally, staff and student support is provided at a lower budgeted cost per finance position than two of the three peers.

**Exhibit 5-3** compares the School System's finance department to that of the peer districts that responded to the peer survey. The amounts are not precisely comparable because of the different functions performed by the districts. The exhibit includes the various functions performed by each of the school system finance departments.

**Exhibit 5-3  
Budget and Function Comparisons  
Metropolitan Nashville Public Schools and Peer District Finance Offices  
2013-2014**

Description	Metropolitan Nashville Public Schools	Atlanta, GA Public Schools	Polk County, FL Public Schools	Duval County, FL Public Schools
2013-2014 Finance Dept. Budget	\$3,082,400	\$7,032,842	\$5,404,760	\$5,264,131
2013-2014 General Fund Budget	\$746,420,300	\$595,123,803	\$714,090,657	\$988,461,053
Finance/District Budget	0.41%	1.18%	0.76%	0.53%
Finance Department Positions	33.5	68	77	46
Total District Employees	10,120	7,249	13,241	11,689
Total Students	82,863	49,128	95,445	126,763
Employees per Finance Position	302	107	173	254
Students per Finance Position	2,474	722	1,245	2,756
Cost per Finance Position	\$92,012	\$103,424	\$70,512	\$114,438

Source: Metropolitan Nashville Public Schools and Peer District 2013-2014 Budgets and Other Various Sources.

## BEST PRACTICES

Best practices are methods, techniques, or tools that have consistently shown positive results, and can be replicated by other organizations as a standard way of executing work-related activities and processes to create and sustain high-performing organizations. When comparing best practices, similarity of entities or organizations is not as critical as it is with benchmarking. In fact, many best practices transcend organizational characteristics.

McConnell Jones Lanier & Murphy LLP (or the review team) identified 22 best practices against which to evaluate the organization and management of the School System. **Exhibit 5-4** provides a summary of these best practices. Best practices that the School System does not meet result in observations, which we discuss in the body of the chapter. However, all observations included in this chapter are not necessarily related to a specific best practice.

**Exhibit 5-4**  
**Summary of Best Practices – Financial Management**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
1.	Document accounting policies and procedures. Advances in technology have made available more effective methods than a hard copy manual. The policies and procedures should be updated periodically. Periodic reviews should be updated in the documentation promptly as they occur.	X		The School System maintains accounting policies and procedures on its website at: <a href="http://www.policy.mnps.org/Page51142.aspx">http://www.policy.mnps.org/Page51142.aspx</a> The procedures are reviewed and updated periodically. The most recent revision date is provided on the face of the policy and procedure document.
2.	Use a website as a means of communicating financial information to citizens and other interested parties.	X		The School System maintains operating and capital budget information on its website at: <a href="http://www.mnps.org/Page56790.aspx">http://www.mnps.org/Page56790.aspx</a> In addition, each year the School System prepares a budget book explaining that year's budget in an easy to understand, straight forward format. The budget book includes numbers from the current year's budget as well as prior year figures that provide the reader with a broader context.
3.	Use electronic devices to capture time worked.	X		The School System is in the testing phases of implementing an automated timekeeping system to capture the attendance information necessary to complete payroll.
4.	Strive to pay 100 percent of employees electronically.	X		The School System has achieved a 93 percent direct deposit participation rate among its employees.

**Exhibit 5-4  
Summary of Best Practices – Financial Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
5.	Establish risk-based plans to determine the priorities of the internal audit activity.		X	The internal audit group has not developed a risk-based approach to conducting internal school fund audits. <b>See Observation 5-A.</b>
6.	A written cost allocation plan is in place that ensures indirect expenses are apportioned to benefiting cost objects in an objective and consistent manner.		X	Although the senior grants accountant prepares an indirect cost proposal for grants, there is no cost allocation plan for charter schools that can be used to determine and support oversight fees charged for administrative services performed on behalf of charter schools. <b>See Observation 3-A in Chapter 3-Impact of Charter Schools on MNPS.</b>
7.	Establish processes for inventorying capital assets on a periodic basis and ensure that such assets are properly accounted for and safeguarded.		X	Although a fixed asset inventory process exists, it is not being administered effectively because departments have not cooperated with the fixed assets accountant. <b>See Observation 5-C.1.</b>
8.	Establish a formal policy specifying a suitable unrestricted fund balance for the general fund, defining criteria for determining a suitable level and outlining plans for adjusting the level of unrestricted fund balance.	X		Per the Tennessee Code Annotated 49-3-352, any accumulated fund balance in excess of three percent (3%) of the budgeted annual operating expenses for the current fiscal year may be budgeted and expended for any education purposes, but must be recommended by the board of education prior to appropriation by the local legislative body. At the end of 2013-2013, the undesignated fund balance exceeded the requirement by approximately \$34,600,000.
9.	Convert paper invoices to electronic format via scanning as soon as they arrive in the accounts payable department. Once scanned, enter the invoice into automated workflow so that a paper invoice is not needed.	X		As invoices arrive via regular mail or e-mail, they are scanned through the Kofax system then distributed to accounts payable clerks for payment via the workflow.
10.	Use accounts payable metrics to track payment efficiency and discounts taken.	X		Each month, the director of financial operations prepares a report of accounts payable statistics such as payment methods, average number of invoices processed per accounts payable staff, invoices received and processed, unpaid invoices, average days to pay, and discounts taken.

**Exhibit 5-4  
Summary of Best Practices – Financial Management (Cont’d)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
11.	Establish a budgeting process that provides principals the flexibility and discretion to allocate resources (people, time, and money) according to their school’s needs.	X		Based on its strategic plan, the district has begun a pilot program with 17 schools to allow principals more autonomy over their school budgets. The district will provide a pool of resources and allow principals to allocate the funds according to their school’s needs. Next year, the pilot group will be increased to 55 schools.
12.	Use performance evaluations as a means to hold budget authorities accountable for financial administration.		X	Principals are not evaluated on the results of internal school fund audits. <b>See Observation 5-B.</b>
13.	Distribute a budget calendar and written budget instructions that provide an overview of the budget process as well as budget preparation tools such as templates and specific line-item instructions for certain budget items.	X		The annual budget book contains an overview of the budget development process as well as a detailed calendar of budget activities. In addition, at the beginning of the budget cycle, schools are provided with a budget template to assist with budget development. The Budget Template Form is to be used to summarize the requested increases/decreases to the current year operating budget, except for cost increases associated with salaries and benefits or cost of living adjustments.
14.	Centralize the procurement of goods and services to ensure consistent application of policy and increase cost effectiveness.	X		The Purchasing Department centrally procures School System-funded goods and services.
15.	Utilize an entity-wide electronic purchasing module to capture and route purchase requisitions along a pre-defined approval pathway to issue authorized purchase orders. Electronic workflow system provides users and purchasing staff real-time information regarding the requests, authorizations, and processing time.		X	Not all purchase requisitions are initiated in the district’s electronic Web Requisition system. Charter schools submit paper requisitions for Title I purchases to Metropolitan Nashville Public Schools Federal Programs for approval and further processing by the Purchasing Department. <b>See Observation 5-G.</b>

**Exhibit 5-4  
Summary of Best Practices – Financial Management (Cont’d)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
16.	Issue a purchase order for every purchase made above a specified minimum dollar amount as purchase orders document what is being purchased and terms under which the entity agrees to make a purchase. Issue blanket purchase orders for repetitive, specified purchases of consumable supplies and services for a specific period of time.		X	Purchase orders are not issued for utility bills. At the time of the review, purchase orders were not consistently issued for maintenance, transportation, and print shop expenses. Purchasing Department management states that purchase orders related to the Maintenance and Transportation Departments have increased during the past two years. <b>See Observation 5-H.</b>
17.	Utilize cooperative agreements and purchasing consortiums to maximize purchasing power and efficiencies.	X		The Purchasing Department participates Metropolitan Nashville Government contracts and in 14 purchasing consortiums. Purchasing policy entitled “Purchasing for MNPS FM 2.111” lists contracts established with Metropolitan Nashville Government, the state of Tennessee, and other community purchasing cooperatives as third priority from which to purchase goods and services. Based on discussions with Purchasing Department staff and samples reviewed, the School System actively purchases goods and services from these cooperative agreements.
18.	Establish thresholds at which purchasing staff is required to obtain competitive bids and quotes in order to receive the best value. Retain evidence of bidding results. Require purchasing manager approval for items above a specific pre-determined dollar amount.	X		Purchasing policy entitled “Purchasing for MNPS FM 2.111” delineates the competition requirements for purchases that fall in four defined categories. Based on samples reviewed, competitive bids are obtained, evidence of purchasing staff engaged in bidding is retained, and purchasing manager approval is obtained.
19.	Compare the purchase request to the remaining amount of funding available in the budget.	X		Purchase requisitions are reviewed by budget offices for federal and local funds to determine if budget is available for the requisitioned purchase. Based on sample reviews, this best practice appears to be consistent practice.

**Exhibit 5-4  
Summary of Best Practices – Financial Management (Cont'd)**

<b>Best Practice Number</b>	<b>Description of Best Practice</b>	<b>Met</b>	<b>Not Met</b>	<b>Explanation</b>
20.	Retain purchase orders; monitor and review open purchase orders, close residual purchase orders.	X		Purchase orders are electronically retained. The purchasing manager monitors open purchase orders and closes them as appropriate. Based on observation and review, this best practice appears to be consistent practice.
21.	Utilize the Purchasing Department to centrally manage the bid process for goods and services that are competitively bid. Involve the department user group to evaluate the bid proposals received against the pre-defined bid criteria. Tabulate results and recommend award to highest scoring vendor.	X		Contracting officers manage the bid process and score the quantitative components of the proposals received. User groups evaluate and score the qualitative aspects of the bid proposals. Evaluations are tabulated by the contracting officers, presented for recommendation of award, and retained. Based on staff discussions and samples reviewed, this best practice appears to be consistent in practice in the last two years.
22.	Establish a contract management program requiring a minimum threshold at which a contract must be prepared, legal review of contracts to mitigate shortcomings or risks to which the entity may be subjected, contract list, and periodic contractor performance evaluation.	X		Purchasing policy entitled "Purchasing for MNPS FM 2.111" requires a contract be prepared for purchases of \$10,000 or more. Contracts are prepared using a contracts database that is periodically reviewed by Metro's legal counsel. Policy requires contracts to be reviewed by Metropolitan legal counsel prior to execution. All district contracts have a signature block for Metro's legal counsel and must be signed prior to being filed with the county. The standard contract template used by the School System contains requirements for periodic contractor evaluations and designates the party responsible and criteria for review. Based on staff discussion and samples reviewed, this best practice appears to be consistently executed.

Source: McConnell Jones Lanier & Murphy LLP Review Team

## ACCOMPLISHMENTS

### ACCOMPLISHMENT 5-A

**The School System uses Metropolitan Nashville Government's online eBid system to sell surplus property.**

Many school districts around the country sell surplus property through live auctions. However, the eBid system used by the School System represents a novel, 21<sup>st</sup> Century approach to the sale of school property. eBid is fashioned after the popular eBay online auction website, which is an online market place that brings millions of people together to buy and sell goods and services. eBid is Metropolitan Nashville's online surplus property auction web site that allows users to bid on surplus property online. It is easy to use and highly secure. eBid offers surplus, seized, confiscated, abandoned, forfeited, unclaimed property and real estate for sale.

Users register at <https://ebid.nashville.gov> and can search various categories such as appliances, collectables, and construction supplies. The School System places surplus property on the site that is fully depreciated and is no longer in use. In addition, surplus property is placed on the site that fits into any of the following disposal categories whether or not fully depreciated including;

- destroyed (sold through eBid or if applicable, sold as recyclable strap material);
- disposed flood damage;
- surplus property lot/warehouse; and
- non-capital item (various property-laptops, monitors, personal printers, calculators, etc.).

Gross proceeds from surplus property sales for 2011-2012 through 2013-2014 (through February 2014) totaled approximately \$461,348. Net proceeds to the School System totaled approximately \$355,277. The School System receives about 77 percent of gross proceeds while Metropolitan Nashville Government retains the remaining 23 percent. **Exhibit 5-5** provides a summary of sales activity since 2014.

**Exhibit 5-5  
Surplus Property Proceeds  
2012 through February 2014**

Fiscal Year	Gross	Net	Gross	Net	Gross	Net
	2011-2012		2012-2013		2013-2014	
July	\$4,342.14	\$3,343.45	\$7,095.32	\$5,463.40	\$31,900.10	\$24,563.08
August	\$8,600.00	\$6,622.00	\$60,196.58	\$46,351.37	\$9,538.24	\$7,344.44
September	\$5,364.44	\$4,130.63	\$6,833.22	\$5,261.58	\$14,756.14	\$11,362.23
October	\$3,516.53	\$2,707.73	\$7,943.76	\$6,116.67	\$9,917.78	\$7,636.69
November	\$10,335.44	\$7,958.29	\$12,725.77	\$9,798.84	\$17,478.96	\$13,458.81
December	\$13,128.73	\$10,109.12	\$8,451.84	\$6,507.92	\$5,311.88	\$4,090.16
January	\$16,856.43	\$12,979.45	\$15,506.83	\$11,940.26	\$5,179.47	\$3,988.19
February	\$6,242.73	\$4,806.94	\$11,368.57	\$8,753.80	\$32,923.94	\$25,351.49
March	\$6,972.45	\$5,368.81	\$4,322.31	\$3,328.18	-	-
April	\$22,295.79	\$17,167.76	\$6,015.35	\$4,631.82	-	-
May	\$49,305.67	\$37,965.37	\$13,379.47	\$10,302.19	-	-
June	\$1,930.05	\$1,486.16	\$31,611.99	\$24,379.73	-	-
Total	\$148,890.40	\$114,645.71	\$185,451.01	\$142,835.76	\$127,006.51	\$97,795.09
<b>Total 2012-2014</b>					<b>\$461,347.92</b>	<b>\$355,276.56</b>

Source: Metropolitan Nashville Public Schools-Fixed Asset Accountant, February 2014.

#### ACCOMPLISHMENT 5-B

**Metropolitan Nashville Public Schools received the Association of School Business Officials International (ASBO) Meritorious Budget Award (MBA) for excellence in budget presentation for the preceding five years (FY2010 through FY2014). The School System was the first school district in Tennessee to receive this award.**

The Association of School Business Officials International, founded in 1910, is a professional association of 5,000 members that provides programs and services to promote the highest standards of school business management practices, professional growth, and the effective use of educational resources. The award is conferred only to school entities that have met or exceeded the Meritorious Budget Award criteria. To earn this award, the School System submitted its budget for a rigorous review based on stringent criteria. Developed by the Association of School Business Officials for school districts, the Meritorious Budget Award criteria guide school business officials toward a quality school budget presentation by enhancing the school business officials' skills in developing, analyzing, and presenting a school system budget.

## DETAILED OBSERVATIONS

### INTERNAL AUDIT

#### OBSERVATION 5-A

**The internal auditors do not use risk-based approaches and high-level analytics to focus and maximize their audit efforts with respect to internal school funds.**

Schools manage large sums of money in the form of internal school funds, the largest portion of which are student activity funds. The *Tennessee Internal School Uniform Accounting Policy Manual* defines internal school funds as any and all money received and accounted for at individual schools and specifically include, but are not limited to:

- any donation or grant made to the school, a school club, or any academic, arts, athletic, or social activity related to a school;
- funds for cafeteria services operated at the school;
- fees collected by the school;
- funds transferred to the local school from the school board that are to be accounted for at the local school level;
- funds raised through cooperative agreements with outside organizations;
- rental fees charged to outside entities for use of school facilities; and
- student activity funds.

Student activity funds pose a risk of significant financial loss to the School System. For example, during 2012-2013, schools received \$9,766,805 and spent \$9,631,368 in student activity funds. As of June 30, 2013, the fund balance of student activity funds was \$5,644,265 across 138 schools. Managing and accounting for these funds is decentralized and widely dispersed within the School System. Risks arise because segregation of duties is not ideal, each school has its own bank account, and cash management expertise varies from school to school. While teachers and coaches handle funds for school events and fundraisers, the principal and school secretary/bookkeeper at each campus is primarily responsible for managing these funds.

The *Tennessee Internal School Uniform Accounting Policy Manual* requires internal school funds to be audited by an independent certified public accountant each year. In addition, the School System's internal auditors perform audits of internal school funds. The purpose of such audits is to ensure accountability for the safekeeping and proper handling of school funds and to determine compliance with the uniform accounting policy manual. No audit can guarantee the safeguarding and proper management of funds. However, internal auditors play a critical compliance role and provide at least some assurance that internal school funds are managed in accordance with the *Tennessee Internal School Uniform Accounting Policy Manual*.

The audit manager and four internal auditors perform school audits throughout the year. Preliminary audits for high schools begin around February, middle schools begin in March, and elementary school audits begin in April. In June, the Internal Audit Department performs year-end closing procedures and provides information to the external auditors. Final audits are completed in October and final audit reports issued in November. Throughout the year, the auditors conduct online reviews of transactions, assist with preparing journal vouchers, and provide advice and training.

Each auditor is assigned 34 schools and uses a standard program to apply basically the same procedures to each school, each year. According to the standardized work program, the internal auditors select 10 percent of checks and all checks over \$1,000. In addition, 10 percent of receipts are selected. A risk-based approach would use audit resources more effectively by selecting samples based on perceived risk. This approach could lead to better audit results.

The Institute of Internal Auditors defines risk-based internal auditing as a methodology that links internal auditing to an organization's overall risk management framework. It allows internal auditors to provide some assurance that risks are being managed effectively based on the organization's "risk appetite", which is defined as the amount of risk an organization is willing to accept. In this approach, audit resources are directed towards potential problem areas as auditors consider factors such as transaction volume, compliance history, expertise and tenure of accounting staff, and the overall internal control environment.

A properly timed and performed risk assessment provides the foundation for more efficient and effective audits. It focuses the auditor's attention on identifying, assessing, and responding to those risks that have the potential to materially affect the administration of student activity funds.

One example of a risk-based approach would be foregoing the application of every audit program step to a school that has no finding during the past five years. Instead of examining individual purchasing transactions in search of purchases made without a purchase order, the auditor might generate a system report that compares purchase order date to invoice date. Since the risk of unauthorized purchases is low, a high-level analytic would be just as effective as a detail disbursements test and take less time. Another example might be timely deposit of funds. In a school where this has not been an issue in the past and the staff has not changed, the auditor might consider preparing a schedule comparing the date a deposit was recorded in the books to the date shown on the bank statement. This type of comparison can be made for low risk schools without examining deposit slips and related backup documentation.

#### **RECOMMENDATION 5-A.1**

**Use a risk-based audit approach to plan the nature, timing, and extent of audit procedures; select audit samples; and allocate staff resources.**

The audit manager for the School System should devise a risk-based audit model using the following factors:

- volume of expenditure and receipt transactions;
- amount of expenditure and receipt transactions;

- tenure of school principal and bookkeeping staff;
- experience of school principal and bookkeeping staff;
- knowledge of school principal and bookkeeping staff;
- results of previous external audits;
- result of previous internal audits;
- nature and timing of fundraisers occurring during the year;
- principal's attitude toward internal control and adherence to the *Tennessee Internal School Uniform Accounting Policy Manual*; and
- other relevant risk factors.

The model should assess each school using the above factors and then design alternative audit approaches and sample selections to reflect the risks identified. A scale and ranking should be developed indicating which schools are high, medium, and low risks. The audit program, instead of applying the same procedures every year to each school, should be tailored based upon the schools assessed risk and risk category. For example, low-risk schools might receive a full audit once every two or three years while high-risk schools would continue to receive an audit each year.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

#### **OBSERVATION 5-B**

**The School System does not take sufficient steps to ensure that appropriate action is taken on internal school fund audit findings so that they are fully addressed in a timely fashion.**

As a result, some schools have reoccurring findings that go unresolved from year to year, which indicates a lack of motivation to comply with the Uniform Activity Manual.

Follow-up audits are helpful for determining whether sufficient action is being taken on audit findings. However, the Internal Audit Department does not perform follow up audits that are documented in a formal follow-up report. Findings from mid-year audits that occur from February through May are reviewed by internal auditors during final audits, which occur in the fall. However, during the subsequent audit season, there is no follow-up on findings in the final report from the previous season.

Formal, documented corrective action plans are useful for holding those responsible for the administration of internal school funds accountable for addressing audit deficiencies. However, principals are not required to submit formal correction action plans that can be monitored and enforced. Although principals are supposed to provide responses to audit findings not all of them do so, and those who provide comments do not always provide a corrective action plan complete with responsibilities and timelines. Principals' responses to internal school fund audits should contain the following elements at a minimum:

- statement as to whether school management agrees with the finding;
- direct response to the finding and its recommendation(s);
- specific actions that management commits to take to correct the finding;
- response that is clear and concise;
- exclusion of information that is not pertinent to the finding or its corrective action plan;
- identification of specific positions, if applicable, responsible for implementation; and
- specific and realistic timetables for implementation.

Tracking audit deficiencies by school, by year is a useful way to identify recurring audit findings and to determine whether personnel responsible for administering internal school funds are addressing internal control weaknesses adequately. Findings that reoccur from year to year at the same school are often an indication that either staff are unaware of how to comply, need more training, or have a lax, or worse, careless attitude regarding compliance. Although the audit manager maintains a record of audit findings, it is not used to hold principals accountable for recurring noncompliance. At one time, the principal and bookkeeper met with representatives of the Internal Audit and Leadership & Learning Departments to review and address recurring deficiencies. According to Internal Audit staff, this practice was discontinued two years ago.

Including audit results in principal evaluations is an effective way to emphasize the critical nature of a principal's financial management responsibilities and to hold them accountable for fulfilling their responsibilities under the Internal School Accounting Act (Section 49-2-110, TCA).

The Internal School Accounting Act (Section 49-2-110, TCA) provides boards of education and school principals with definite authority and responsibility for the administration and safekeeping of all internal school funds. The Act makes school principals responsible for the safekeeping, management, and accounting of all student activity and other internal school funds. Principal evaluations do not specifically address internal school funds. Section D22 of the Administrator Evaluation Observation Form rates principals on budgetary responsibilities, which is a broader category than internal school fund audit results.

Duties and responsibilities of individual school principals outlined in the *Tennessee Internal School Uniform Accounting Policy Manual* include, but are not limited to, the following:

- notifying the Comptroller of the Treasury, Division of Municipal Audit if the principal becomes aware of any evidence of fraud related to internal school funds;
- implementing and complying with the regulations, standards, and procedures contained in the Manual and any other policies adopted by the local board of education that has jurisdiction over the school;
- providing for the safekeeping and handling of all school money and other school property, irrespective of the source of such money or property (Section 49-2-110, TCA);

- submitting reports and other materials to the director of schools or board of education on a timely basis, as directed;
- delivering all financial records, books, ledgers, computer files, reports, and supporting documentation, as directed by the director of schools or board of education;
- assuming responsibility for equipment located at the school, including equipment security, inventory control, care, and utilization;
- complying with purchasing procedures prescribed by the board of education, including bid policies and procedures established by the board for student activity and other internal school funds;
- notifying the director of schools or the director's designee and appropriate local law enforcement agency when equipment is stolen, misplaced, or destroyed;
- complying with the provisions of Section 49-6-2007, TCA, regarding the disposition or transfer of property; and
- maintaining a current edition of the Manual on school premises and making it available to all school personnel.

#### **RECOMMENDATION 5-B.1**

**Enforce accountability for addressing and resolving internal school fund audit findings by conducting follow up audits, including principal responses in audit reports, requiring schools to prepare formal corrective action plans, tracking audit deficiencies for discussion, and making audit results a criteria in principal evaluations.**

The chief financial officer, audit manager, and appropriate Leadership and Learning staff should coordinate efforts to reinforce accountability for internal school funds. The audit manager should consider moving the start date for mid-year audits up a few months to allow time to conduct follow up audits. Leadership & Learning management should coordinate with the Internal Audit Department to require that all principals provide a response to audit findings and the Internal Audit Department should include the responses in the final audit report. Leadership & Learning management should instruct principals to submit formal corrective action plans with their comments. The corrective action plans should, at a minimum, include the following for each finding:

- school;
- principal name;
- bookkeeper name;
- finding number;
- year observed;
- description;

- management's response;
- corrective action taken or proposed;
- person responsible; and
- resolution deadline.

Leadership & Learning management should hold principals accountable for executing corrective action plans. Internal auditors should review these corrective action plans to gauge progress during follow up audits. The audit manager should review historical audit findings and trends with principals and bookkeepers from schools with recurring and/or significant findings. Finally, Leadership & Learning management should work with Human Resources to revise principal evaluations as necessary to give heavier weight to audit findings and their subsequent resolution.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

#### **GENERAL ACCOUNTING**

##### **OBSERVATION 5-C**

**Although internal controls over sensitive; technology assets are strong, the process for the bi-annual inventory of capitalized assets needs to be strengthened.**

The School System's internal controls over sensitive items, Information Technology items, and vehicles are operating effectively. These items go through a physical inventory annually. Capital items recorded in the School System's accounting system for depreciation goes through a bi-annual physical inventory.

Sound, comprehensive controls over fixed assets are critical to ensure that fixed and sensitive assets are safeguarded and accounted for. The School System defines fixed assets as "tangible items of a non-consumable nature, the value of which is \$5,000.00 or more and the normal expected life of one year or more. Examples of fixed assets are land, buildings, equipment, fixtures, motor vehicles, audiovisual materials and certain computer hardware and software".

Sensitive minor equipment is defined as items purchased with a cost of between \$100.00 and \$5,000.00 and a useful life of over one year. Sensitive equipment includes items such as computers and external computer peripherals as determined by the State Personal Property Section. All sensitive assets are considered trackable and must be entered into the School System's FileMaker Pro inventory system.

Written fixed asset procedures exist, and there are strong controls over sensitive items, Information Technology items, and vehicles. Items tracked on the FileMaker Pro system have a physical inventory annually. Information Technology items are received and tagged at a central warehouse and entered into the FileMaker Pro database. The central warehouse receives approximately 95 percent of all sensitive items coming into the District. Other sensitive items are received and tagged by school and department inventory staff. Inventory tags are bar coded and location codes are placed in the door jams of offices/classrooms where the equipment is located. The tag numbers and location codes are also entered into the FileMaker Pro database. Transportation tracks VIN numbers and assignments on all vehicles.

The Fixed Asset Fund for MNPS carries a balance for assets at June 2014 of the following: capital asset original price \$1,081,485,393 less accumulated depreciation \$397,947,256 for book value \$683,538,137. Of this amount Machinery, Equipment, Furniture and Fixtures represents 0.72 percent (\$4,950,495). Some of these items are tracked in the FileMaker Pro but the majority are only tracked in the School System's accounting software. These items are required to have a bi-annual physical inventory. The bi-annual physical inventory is organized by the fixed asset accountant. This process is to send sheets out to schools and departments to be reviewed, updated and then returned. Many of these items are fully depreciated and have a negligible salvage value. When an item is obsolete and no longer useable, the school/department will notify the warehouse to pick up the item for surplus or sale on Ebid.

Principals and department heads have the ultimate responsibility and accountability for the School System's property. Each school principal or department head is responsible for designating an inventory lead at their location. The lead is responsible for maintaining control of the inventory and recording movement of equipment within the building or outside of the building.

Finally, schools are not putting the serial number, asset number, and model number on the surplus online system form that the school completes to dispose of surplus inventory. The absence of this information makes it more difficult for the fixed assets clerk to remove disposed assets from the system. The fixed assets clerk needs this information to remove the item from the books. Currently, the fixed assets clerk has to look at the picture of the item and hunt for it in the system. If the school provided the information, it would facilitate locating and removing the item from the records thereby reducing the number of surplus items remaining on the books.

#### **RECOMMENDATION 5-C.1**

**Strengthen controls over the bi-annual physical inventory that is organized by the fixed asset accountant.**

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

**RECOMMENDATION 5-C.2**

**Require that the serial number, asset number, and model number be placed on the surplus equipment form so that this data can be captured and used by the fixed asset accountant to remove surplus assets from the fixed assets system.**

**FISCAL IMPACT**

This recommendation can be implemented with existing resources.

**OBSERVATION 5-D**

**The School System's method of sending journal voucher documentation to Metropolitan Nashville Government's Accounting Office is archaic and redundant, particularly in light of the capabilities of readily available document imaging technology.**

The senior accountants in the Budgeting and Financial Reporting Department are responsible for the following tasks, which result in journal vouchers and associated supporting documentation including:

- a) payroll edit entries;
- b) internal service fund charges;
- c) transportation department charges; and
- d) various charges to individual schools.

After the entries are entered into the accounting software, the current method of sending the journal voucher documentation is via interoffice mail. Imaging technology allows documents to be scanned and e-mailed. This process is much more efficient than sending paper documents through interoffice mail. By using this technology, the School System can reduce the usage of paper.

**Exhibit 5-6** is an image of the FASTpak – the interoffice envelope used to send documentation to Metropolitan Nashville Government's Accounting Office.

**Exhibit 5-6  
FASTpak**

**METRO MAIL**

METROPOLITAN GOVERNMENT  
of Nashville and Davidson County  
**FASTpak**

Department: \_\_\_\_\_

Entered by (name and UserID#): \_\_\_\_\_

Date entered: \_\_\_\_\_

Department Approval: \_\_\_\_\_

Budgets Approval: \_\_\_\_\_

**N/A**  
(for BX document type only)

Document Type: \_\_\_\_\_

Batch Number: \_\_\_\_\_

MetroMail Routing Instructions - Please Deliver To			
Document Type	Agency	Contact	Select One
Payroll Time Entry	Central Payroll		
RC	Division of Accounts		
RQ	Division of Purchases		
PV/OP/OF/OE/OI/OJ	Division of Accounts - AP		
BX	Office of Management & Budget		
JE	Division of Accounts		
FA/DEP	Division of Accounts		

**RECOMMENDATION 5-D.1**

**Use imaging and e-mail technology to send journal vouchers and related supporting documentation to Metropolitan Nashville Government’s Accounting Department, and discontinue sending paper documents through interoffice mail.**

**FISCAL IMPACT**

This recommendation can be implemented with existing resources.

**OBSERVATION 5-E**

**The School System does not collect all charges in advance when providing certain services to the public.**

Not collecting the funds in advance places extra administrative burden on the School System because the funds must be tracked and collected. In addition, if the charges are not paid, the School System faces financial loss.

The School System makes its facilities available for public use. The facility coordinator uses a system called SchoolDude to track facility rentals and usage. The facility coordinator and the accounts receivable technician review the information before it is entered into SchoolDude. The accounts receivable technician then prints an invoice and sends it to the customer.

The Transportation Department provides outside party field trip invoices to the accounts receivable technician. The Transportation Department sends the invoices through interoffice mail, and the accounts receivable technician enters them into an Access Database for tracking. The accounts payable clerk then sends the invoice to the customer and provides a monthly report to the director of Financial Operations.

As part of its 2013-2014 department goal effective July 1, 2013, the School System required organizations who use their facilities to make a deposit that would cover the cost of the rental prior to use, excluding personnel costs for custodial (custodial services are outsourced) and food service fees which are billed afterwards. The bills for these services are billed after the services have been provided. Collecting facility fees in advance has increased collections with less outstanding balances at the end of the fiscal year.

The coordinator of facility use and the accounts receivable technician meet monthly to review invoices from SchoolDude prior to mailing them to customers. The objective is to make sure all scheduled usages are accounted for properly.

Each month, the accounts receivable technician meets with the director of Financial Operations to review the invoice report and accounts receivable aging. Once payments have been posted, they decide which accounts will require collection efforts.

**Exhibit 5-7** provides a summary of outstanding facility rental receivables as of December 31, 2013 and shows that \$37,079 of receivables were written off.

**Exhibit 5-7  
Public Field Trip and Facility Rental Receivables**

Description	Balance July 1, 2013	Current Year Charges	Payments	Write-offs	Balance December 31, 2013
Field Trips	\$53,884	\$91,700	\$142,398	\$-0-	\$3,186
Building Rental	\$59,757	\$96,783	\$90,882	\$37,079	\$28,579
<b>Total</b>	<b>\$113,641</b>	<b>\$188,483</b>	<b>\$233,280</b>	<b>\$37,079</b>	<b>\$31,765</b>

Source: December 2013 Financial Operations Report, page 2 of 9.

The annual breakdown of the \$37,079 write offs is as follows:

- 2010-2011 - \$558
- 2011-2012 - \$19,899
- 2012-2013 - \$16,622

The School System’s Facility Use Policy FM 2.118 states that final payment of the full amount due for the use of school property is due within 30 days of invoice. Balances older than 60 days are turned over to a collection agency. Customers with over 60 days of unpaid invoices who have made no effort of contacting Financial Operations for payment arrangements are subject to collection activities and are denied future usage.

Of the \$31,765 in outstanding receivables as of December 31, 2013, \$3,187, or 10 percent, was 60 days or more past due. The 10 percent consisted of groups who subsequently contacted MNPS regarding payment arrangements. As of June 30, 2014, only \$1,220, or 3.84 percent of the \$31,765 balance at December 31, 2013 was still outstanding.

**Exhibit 5-8** provides an overview of balances turned over to the collection agency since June 2012 and provides the balance due as of April 2014.

**Exhibit 5-8  
Facility Rental Collection Agency Activity**

Total Referred to Agency	\$48,076.50
Total Collected	(\$14,745.87)
Agency Commission	(\$3,812.13)
<b>Balance Due</b>	<b>\$29,518.50</b>

*Source: Operations Facility Rental Collection Report.*

**RECOMMENDATION 5-E.1**

**Require the public to pay in advance for field trips and school facility rentals.**

The School System should not carry accounts receivable for goods and services provided to the public. In addition to collecting an advance deposit for field trips and facility rentals, the School System should collect for all anticipated charges before services are provided or access granted to rented school facilities. The chief financial officer should instruct the director of Financial Operations to eliminate the practice of carrying public accounts receivable and issue any policy directives necessary to achieve this goal.

**FISCAL IMPACT**

The 2013-2014 write offs totaled \$4,489. Future write-offs are likely to be lower than in previous years because of anticipated changes in collection procedures. Assuming write offs could be reduced to the 2013-2014 amount by collecting balances up front, the annual savings would be approximately \$5,000 per year.

**OBSERVATION 5-F**

**The School System’s method of disbursing and recovering Basic Education Program funds is antiquated and inefficient.**

Tennessee Code Annotated, Section 49-3-359 requires that Tennessee schools provide basic education program funding for instructional supplies. The amount is \$200 for every teacher in kindergarten through grade twelve. One hundred dollars is given directly to the teacher for such purpose as determined by each teacher. Metropolitan Nashville Public Schools adds an additional \$100 to that required by statute so that the total amount given to each teacher is \$200.

In addition, the statute requires that another \$100 be placed in a pooled fund for the use of all teachers in a school. These funds are to be spent as determined by a committee of teachers in the school. The purpose of the pooled funds is to permit purchase of items or equipment that may exceed an individual teacher's allocation for the benefit of all such teachers at the school and the enhancement of the instructional program.

The School System includes Basic Education Program funds in teacher checks at the beginning of each year and settles up with each teacher at the end of the year when teachers bring in receipts to support expenditures. Unspent funds are returned to the school in addition to funds for which the teacher fails to provide receipts. This cycle continues each year. The process of managing Basic Education Program expenditures and reimbursements can be time consuming. More effective, technology through prepaid business credit cards is available to streamline the process.

A prepaid business credit card is ideal for Basic Education Program purchases because it can be tailored based upon the School System's needs. The School System can apply any dollar amount to each card and set limitations as to which category of spending will be allowed or restricted, for example grocery stores, retail shops, gas stations, restaurants, and so on. The card holder and the School System's program administrator can view expenditure statements online, and the School System can adjust not only the total amount of funds on each card, but also the total amount on deposit with the prepaid card company.

Although each teacher would still be required to submit expenditure receipts, the year-end reconciliation process and providing Basic Education Program funds the following year would be simplified and streamlined. The teacher would no longer be required to return unused funds, because they would still be on the card. There would be no need to issue a check at the beginning of the following school year; funds could be added to the card using the card provider's online system.

#### **RECOMMENDATION 5-F.1**

**Use prepaid business credit cards to distribute Basic Education Program funds, and eliminate the practice of adding funds to teacher paychecks at the beginning of each school year.**

The chief financial officer should instruct the director of Budgeting and Financial Reporting to research available prepaid business credit card options. The director of Budgeting and Financial Reporting should coordinate with the chief academic officer and the executive director of Technology and Information Services to develop a plan to enroll in a prepaid credit card program in time for the 2015 school year.

## FISCAL IMPACT

There could be some cost to implementing the program such as the cost of the prepaid business credit cards and the technology required to setup the cards, monitor their usage, and audit purchases. These costs would need to be determined through consultation with the prepaid debit card service provider. Any costs associated with administering the program will depend on which card vendor is selected and how many cards are issued.

## PURCHASING

### OBSERVATION 5-G

#### **The School System does not consistently use electronic purchase requisitions.**

The School System employs a centralized purchasing model to procure most of its goods and services. In accordance with the standard operating procedure entitled "Completion of Purchase Order", a requisition should be entered electronically into the procure-to-pay system by a school or department.

Web Requisition (Web Req) is the proprietary procure-to-pay workflow system that was implemented in 2010 for the School System. Web Req electronically routes purchase requisitions along the pre-defined approval process. Web Req interfaces with the Oracle EnterpriseOne accounting system (EnterpriseOne system), which issues purchase orders upon final approval. However, purchase requisitions for charter school expenditures using federal funding are initiated outside of Web Req in paper form and routed to the Purchasing Department. Processing paper requisitions for charter schools is less efficient and can cause delays in the procurement process.

Federal funding is given to the School System, which is allocated and in escrow for charter schools to spend. Charter schools do not have access to the Web Req system to initiate purchase requisitions. As a result, charter school personnel complete paper requisitions, obtain campus-level approvals and subsequently submit the requisition to the School System's federal budget office for approval. From here the paper requisition is entered into the Oracle EnterpriseOne system by Purchasing Department staff.

As the system is currently configured, authorized Web Req users have unrestricted access to the accounts from which to requisition goods and services. The system is not configured to limit charter schools from accessing only federal funds. The School System requires charter schools to use the manual paper requisitions process to mitigate the possibility of School System resources being inadvertently used to procure charter school goods and services.

Currently, the Purchasing Department estimates that they process approximately 15 to 25 paper requisitions each month for charter schools. While the current number of monthly paper requisitions is not overly burdensome on current resources, the process can be automated and create efficiencies. Standardized automated processes can create transparency to identify and track requisitions and can be processed faster. Currently, the Purchasing Department averages two and a half days to convert initiated purchase requisitions into purchase orders using the EnterpriseOne system. Manual purchase requisitions take a week or more and could get lost in the process.

Charter schools have experienced tremendous growth since 2004-2005. Charter schools in Nashville have grown from 143 students in 2004-2005 to more than 5,400 students in 2014-2015. As charter schools continue to grow the number of paper requisitions processed will increase and become challenging for existing resources.

#### **RECOMMENDATION 5-G.1**

##### **Configure the Web Requisition system for limited access for charter schools to initiate electronic purchase requisitions.**

The School System should explore if Web Req can be reconfigured in a manner that would provide charter schools limited access to their specific funds when initiating purchase requisitions. Eliminating the paper purchase requisition process for charter schools will streamline and standardize the procurement process and reduce potential delays and bottlenecks associated with the current centralized manual entry system.

#### **FISCAL IMPACT**

This recommendation could be implemented with current resources.

#### **OBSERVATION 5-H**

##### **Purchase orders are not consistently issued for all contracted vendors.**

In 2012-2013, the School System expended \$140,536,920 for goods and services excluding payroll and debt payments. Purchase orders were not issued for \$61,018,217 of the \$140,536,920 expended total, or approximately 43 percent.

The School System employs a centralized purchasing model to procure most of its goods and services. Through the Purchasing Department's electronic workflow system, Web Requisition (Web Req) purchase requisitions are initiated and routed along a pre-defined authorization path. Upon obtaining the requisite approvals, Web Req interfaces, on a batch basis, with the Oracle accounting system that issues the purchase orders.

The School System's purchasing policy states that employees may initiate orders using purchase orders or purchasing cards. A purchasing card may be used for travel purchases, purchases from vendors who will not accept a School System purchase order, or in emergency situations. However, some expenditures such as utilities, maintenance, transportation, print shop expenses, and food ordered by Nutrition Services, are made without issuing a purchase order through the Oracle accounting system.

The School System does not issue purchase orders for utility services such as electric, gas, waste removal, and phone. Utility services are procured without a contract from the utility providers serving the local area. Utilities are on "direct pay", as purchase orders are not issued and invoices are received and processed by the School System's Accounts Payable Department. In 2012-2013, maintenance expenses were on "direct pay," however in 2013-2014, they transitioned to purchase order process.

The Nutrition Services Department orders dry goods, produce, and dairy using a purchase order module in WebSMARTT, a comprehensive web-based solution designed specifically for food services that tracks

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sales transactions and inventory. The purchase order is generated at the school level for individual cafeteria needs on a weekly basis. The purchase order number is used in receiving and invoicing. However, as the purchase order within WebSMARTT is currently configured, the order is not applied against the aggregate expenditure by vendor upon entry prior to approval. On a monthly basis, WebSMARTT data is uploaded into the Oracle accounting system. Actual aggregated expenditures are compared to budget amounts on a monthly basis in arrears.

As depicted in **Exhibit 5-9**, the top 50 vendors from which the School System procured goods and services represent \$107,448,036, or 76 percent of the total \$140,536,920. **Exhibit 5-10** indicates that of these top 50 vendors, purchase orders were not issued for 17 of the vendors that make up \$37,069,437 or 34 percent of the \$107,448,035 that the School System expended with the top 50 vendors.

**Exhibit 5-9  
Top 50 Vendors by Expenditures in 2012-2013**

Vendor	PO	Sum of Amount
GCA SVCS GRP (ACH)	Yes	\$23,200,671
NASHVILLE ELECTRIC SERVICE CO	No	18,709,751
TN BOOK CO (ACH)	Yes	9,476,967
INSTITUTIONAL WHOLESALE CO INC	Yes	8,621,293
WRIGHT EXPRESS FINANCIAL SERVI	No	5,003,515
MDHA (ACH) (P#)	No	4,593,967
PIEDMONT NATURAL GAS CO (METRO	No	2,345,058
NCS PEARSON INC (MAINTENANCE)	Yes	2,259,586
GOLDENROD DAIRY (ACH)	Yes	2,153,706
TRIBAL EDUCATION (ACH)	Yes	2,085,299
APPLE INC (ACH)	Yes	1,879,609
A Z OFFICE RESOURCE INC (ACH)	Yes	1,656,304
DELL MARKETING LP(ROUNDROCK TX	Yes	1,572,990
SPRINT	No	1,558,493
GENESIS LEARNING CENTERS (ACH)	Yes	1,388,776

**Exhibit 5-9  
Top 50 Vendors By Expenditures In 2012-2013**

Vendors	PO	Aggregate Expenditure
AMERICAN PAPER & TWINE CO (ACH)	Yes	1,340,542
CDW GOVERNMENT INC (ACH)	Yes	1,224,048
EDUCATIONAL BASED SVCS	Yes	1,142,410
CENTERSTONE CMHC (ACH)	Yes	1,065,445
ALLIED WASTE (ACH)	No	958,087
SPECTRUM CENTER SCHOOLS	Yes	878,396
METRO TRANSIT AUTHORITY (ACH)	Yes	847,912
EDUCATION NETWORKS OF AMERICA	No	797,212
CATAPULT LEARNING LLC	Yes	772,584
ANGELO FORMOSA FOODS INC (ACH)	Yes	717,043
MID SOUTH BUS CENTER INC (ACH)	No	694,224
SCHOOL SPECIALTY INC #34 (TN/W	Yes	652,727
NEW TEACHER PROJECT INC, THE	Yes	638,729
BELLSOUTH (85 ANNEX)	No	637,600
FEY VOR RITE PRODUCE SALES INC	Yes	567,183
TEACH FOR AMERICA	No	556,530
BEACON TECHNOLOGIES (ACH)	Yes	523,582
DISCOVERY EDUCATION (MARYLAND)	Yes	519,360
AMERICAN ALLIANCE INNOVATIVE S	Yes	466,808
MNPS PV4100530 FY13 Exp Accrue	No	436,086
RICOH USA PROGRAM (ACH)	No	432,770
LIPSCOMB UNIV/COLLEGE OF ED	Yes	390,124
FERGUSON ENTERPRISES (ACH)	No	386,796
MUSIC & ARTS CENTER	Yes	386,580
TRISTAR DIGITAL CONNECTIONS LL	Yes	381,382
GIRTMAN & ASSOC INC (ACH)	No	379,172
PILGRIMS PRIDE CORP	Yes	369,440
VANDERBILT UNIVERSITY MEDICAL	Yes	366,330
BUCK INSTITUTE FOR EDUCATION	Yes	363,513
SPECIAL SECURITY SERVICES INC	Yes	361,403
JOHNSTONE SUPPLY (ACH)	No	360,180
CAROLINA BIOLOGICAL SUPPLY CO	Yes	347,723
MAYNARD SELECT LLC (ACH)	No	338,834
BLACKBOARD INC	Yes	321,266
MID TENN FORD TRUCK SALES INC	No	320,030
<b>Top 50 Vendors by Expenditures Total</b>		<b>\$107,448,035</b>
<b>Total Expenditures</b>		<b>\$140,536,920</b>
<b>Percentage of Total</b>		<b>76%</b>

Source: Metropolitan Nashville Public Schools Purchasing Summary, 2012-2013.

**Exhibit 5-10  
Top 50 Vendors by Expenditures Without Purchase Orders In 2012-2013**

<b>Vendor</b>	<b>PO</b>	<b>Sum of Amount</b>
NASHVILLE ELECTRIC SERVICE CO	No	18,709,751
WRIGHT EXPRESS FINANCIAL SERVI	No	5,003,515
MDHA (ACH) (P#)	No	4,593,967
PIEDMONT NATURAL GAS CO (METRO	No	2,345,058
SPRINT	No	1,558,493
ALLIED WASTE (ACH)	No	958,087
MID SOUTH BUS CENTER INC (ACH)	No	694,224
BELLSOUTH (85 ANNEX)	No	637,600
TEACH FOR AMERICA	No	555,000
EDUCATION NETWORKS OF AMERICA	No	497,524
MNPS PV4100530 FY13 Exp Accrue	No	436,086
RICOH USA PROGRAM (ACH)	No	3,555
FERGUSON ENTERPRISES (ACH)	No	244,401
GIRTMAN & ASSOC INC (ACH)	No	100,101
JOHNSTONE SUPPLY (ACH)	No	73,210
MAYNARD SELECT LLC (ACH)	No	338,834
MID TENN FORD TRUCK SALES INC	No	320,030
<b>Top 50 Vendor By Expenditures Without Purchase Orders</b>		<b>\$37,069,437</b>
<b>Top 50 Vendor By Expenditures</b>		<b>\$107,448,035</b>
<b>Top 50 Vendors By Expenditures Without Purchase Orders as Percentage of Total</b>		<b>34%</b>

Source: Metropolitan Nashville Public Schools Purchasing Summary, 2012-2013.

Many of the 17 vendors listed above are utility providers and are not contracted as previously mentioned. Two of the 17 vendors listed in Exhibit 5-10 are providing repetitive consumable goods and services that are contracted for a specific period of time with a maximum amount. Two other vendors listed above are contracted but do not have a specified maximum contract amount. By not issuing purchase orders for each vendor at the contracted amount, the School System is missing the opportunities to create consistencies among the purchasing business processes and establish an automated method of monitoring the aggregated expenditure by contract.

**RECOMMENDATION 5-H.1****Issue purchase orders for all contracted vendors and eliminate direct pay.**

The School System should require purchase orders to be issued for all contracted vendors thereby eliminating exception processing of “direct pay.” Blanket purchase orders should be used for contracts for goods and services that are provided on a consistent basis with multiple delivery dates over a set period of time. A blanket purchase order allows multiple purchases to be made for a specified period of time against the same order number. Similar to a regular purchase order, departmental funds are encumbered for the contracted amount upon the issuance of a blanket purchase order. Blanket orders should be sent to the vendor so they know the PO number to include on all invoices.

**FISCAL IMPACT**

The School System can implement this recommendation with existing resources.

**OBSERVATION 5-I****The School System does not have a formal review process with written procedures for evaluating contractor performance and contract compliance.**

The School System does not have a formal review process with written procedures for evaluating vendor performance to ensure consistency and timeliness of contract compliance. The standard contract template used by the School System contains a provision for contractor performance evaluations. The provision assigns a specific department position the responsibility of performing and documenting the contractor’s performance evaluation during the term of the contract. Some contracts detail specific criteria on which the evaluations will be measured, some do not. The School System does not have procedures detailing when and how the evaluations are required to be completed if the contract is silent to these details. Additionally, the School System does not centrally monitor the responsible parties listed in the contract to ensure the evaluations are completed and retained.

The Purchasing Department maintains a “contracts tracking spreadsheet” that captures pertinent information such as vendor name and number, funding source, competitive bid from which the contract was awarded, the contract number, and the effective and termination dates for all contracts issued by the School System. This multi-tabbed document contains 3,400 lines of active, amended, and terminated contracts for the School System. It provides quick reference to high-level contract specifics that is used for queries and research.

Within established industry best practices, a properly completed vendor evaluation provides for evidence that contracted terms are being monitored, appropriate records are maintained, vendor performance is being evaluated, contracts are managed for close-out, and contract results are evaluated. Without establishing standard procedures and tools to evaluate, document, and ensure the responsible parties are completing vendor evaluations and monitoring contract compliance, the School System may not be consistent in vendor evaluations and may be accepting inferior goods or services and possibly exposed to financial loss.

**RECOMMENDATION 5-I.1**

**Strengthen the contractor performance evaluation process by establishing written procedures and tools, and centralize retention of the evaluations.**

To ensure contractor evaluations are performed in a consistent manner, the School System should establish and implement written procedures and tools used to evaluate and document the contractor performance evaluations and contract compliance. Completed evaluations could be centrally retained in electronic format on the shared drive with limited access to Purchasing personnel.

**FISCAL IMPACT**

This recommendation can be implemented using existing resources.

## ALTERNATIVE SOURCING AND LEVERAGING OPPORTUNITIES

In this section of the chapter, the review team evaluates opportunities for the School System to outsource financial operations or leverage resources with Metropolitan Nashville Government. Typically, it is not practical for school districts to outsource financial management activities due to the unique complexities of school accounting, reporting, administrative, and legal requirements associated with school operations. The Metropolitan Nashville Public School System is no exception. For these reasons, with the exception of the internal school fund audit function, the review team deems outsourcing financial management functions to be neither practical nor cost effective. With respect to leveraging, many financial functions are already leveraged with Metropolitan Nashville Government. As a result, only opportunities for outsourcing or leveraging internal school funds are evaluated in this section.

### OUTSOURCING INTERNAL SCHOOL FUND AUDITS

We do not consider the internal school fund audits to be a viable outsourcing opportunity. It would be neither efficient nor cost effective to do so. Therefore, we believe the function should remain with the School System.

The audit function consists of a manager, four auditors, and two trainers. **Exhibit 5-11** presents the department's 2014-2015 \$622,800 budget.

**Exhibit 5-11**  
**School Audit Function Budget**  
**2014-2015**

Account Description	Amount
Salaries	\$367,200
Supplies & Materials	5,000
Other Expense	3,700
FICA, Medicare, Pension & Insurance	185,500
Travel\Mileage	5,900
Contracted Services	55,500
<b>Total Budget</b>	<b>\$622,800</b>

*Source: Metropolitan Nashville Public Schools 2014-2015 Budget, Document #9.*

The audit department performs 136 school fund audits per year in addition to the following responsibilities:

- trains new school bookkeepers to maintain compliance with Tennessee Internal School Uniform Accounting Policy Manual;
- provides advice regarding school fund transactions;
- assists bookkeepers with operating and navigating School Funds Online, the system used for internal school fund accounting;
- approves requests to establish new vendors in the accounting system;

- reviews and assists with preparation of monthly bank reconciliations;
- conducts online reviews of transactions throughout the year;
- performs special assignments upon request; and
- assist external auditors during year-end audit.

**Exhibit 5-12** presents the total available hours the department has during the year to accomplish its responsibilities.

**Exhibit 5-12  
Available Audit Department Hours per Staff**

Account Description	Amount
Weeks per year	52
Hours per Week	40
<b>Total Available Hours per Year</b>	<b>2,080</b>
Vacation	(120)
Holiday	(80)
Sick	(96)
Personal Days	(24)
<b>Total Available Work Hours per Year per staff</b>	<b>1,760</b>
<b>Total Audit Staff Available Hours (4*1,760)</b>	<b>7,040</b>

*Source: Metropolitan Nashville Public Schools Internal Audit Department.*

Auditors do not track time spent conducting internal school fund audits. Per discussion with audit staff, the time is difficult to quantify because audit activity is ongoing throughout the year with online monitoring of school transactions and bookkeeper support. The auditors consider this activity to be a part of the annual audit that takes place once a year. Auditors provided the review team with their best estimate of the time incurred to audit internal school funds including all monitoring and support activities. The review team used the estimates to calculate a utilization percentage to assess how much excess capacity is in the department. **Exhibit 5-13** presents the calculation, which shows that 98 percent of auditors' available time is spent performing audit and related activities. This analysis assumes that only internal school funds audits would be outsourced. The audit manager trainer positions would not be outsourced and would remain with the School System.

**Exhibit 5-13  
Estimate of Internal School Fund Audit Hours**

Description	Time Estimate	Mid-Point Hours	# of Schools	Total Estimated Hours
High Schools	80-100 hours	90	21	1,890
Middle Schools	40-60 hours	50	34	1,700
Elementary Schools	30-50 hours	40	73	2,920
Special Schools	40-60 hours	50	8	400
<b>Total Audit Hours</b>			<b>136</b>	<b>6,910</b>
<b>Total Audit Staff Available Hours</b>				<b>7,040</b>
<b>Audit Staff Utilization Percentage</b>				<b>98%</b>

Source: Metropolitan Nashville Public Schools Internal Audit Department.

Using the estimate of total audit hours, the blended cost to audit internal school funds is estimated to be \$59 per hour as shown in **Exhibit 5-14**.

**Exhibit 5-14  
Calculation of Blended Cost Rate**

Audit Function Budget	\$622,800
Less: Manager & Two Trainers	(\$213,200)
Adjusted Budget-Four Auditors	\$409,600
Total Audit Hours	6,910
<b>Blended Rate</b>	<b>\$59</b>

Source: Metropolitan Nashville Public Schools Internal Audit Department 2014-2015 budget, and Director of Budgeting and Financial Reporting.

To be a candidate for cost-effective outsourcing, an external audit entity would need to be able to perform the 136 audits at a blended rate considerably less than \$59. McConnell Jones Lanier & Murphy LLP's affiliate McConnell & Jones LLP is a Houston, Texas based certified public accounting firm that performs audits of a similar nature. Based on our firm's standard billing rates ranging from \$100 for audit staff to a \$300 partner rate, it is not likely that a well-qualified independent certified public accounting firm would be able to conduct the school audits for a blended rate less than \$59. Even with gains in efficiency, the rate spread is too wide. Consequently, outsourcing the School System's internal audit function is not deemed to be cost effective and therefore not recommended.

**LEVERAGING INTERNAL SCHOOL FUND AUDITS**

This analysis focuses on the ability of the Metropolitan Nashville Office of Internal Audit eight staff auditors to absorb the School System internal school audit function. Based on the analysis in **Exhibit 5-15**, Metropolitan Nashville Government audit staff are over capacity by an estimated 328 hours. Therefore, it would not be feasible to leverage Metropolitan Nashville Government's audit staff to absorb the School System's internal school fund audits.

Metropolitan Nashville Government’s audit function has 10 full time staff consisting of the chief audit executive, one audit manager, and eight staff auditors. **Exhibit 5-15** provides an overview of annual available hours for Metropolitan Audit personnel.

**Exhibit 5-15  
Metropolitan Nashville Government  
Available Audit Department Hours per Staff**

Account Description	Amount
Hours per year (365*8)	2,920
Weekends (104*8)	(832)
Holidays	(80)
Vacation & Personal	(100)
Sick Self & Family	(60)
<b>Total Available Work Hours per Year per staff</b>	<b>1,848</b>
Direct time percentage (to factor in time staff spends on administrative duties)	81%
<b>Available Hours per Audit Staff</b>	<b>1,497</b>
# of Audit Staff	10
Total Audit Staff Available Hours	14,969
Estimated Hours Lost through Turnover (10 percent)	(1,497)
Audit Management Hours	(1,300)
Non-audit services: investigations, disclosures, and other requests	(1,700)
<b>Estimated Audit Hours Available</b>	<b>10,472</b>
Average hours to complete audits in-progress	(1,200)
<b>Estimated Audit Hours Available for New Audit Projects</b>	<b>9,272</b>
New Audits Conducted per Year	12
Average hours per audit	800
<b>Total Hours Required</b>	<b>9,600</b>
<b>Estimated Audit Hours Available</b>	<b>(328)</b>
<b>Estimated Hours Over Capacity</b>	<b>328</b>

Source: Metropolitan Nashville Government Internal Audit Department-Utilization Forecast.

## FISCAL IMPACT SUMMARY

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 5: FINANCIAL MANAGEMENT</b>								
5-A.1	Use a risk-based audit approach to plan the nature, timing, and extent of audit procedures; select audit samples; and allocate staff resources.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5-B.1	Enforce accountability for addressing and resolving internal school fund audit findings by conducting follow up audits, including principal responses in audit reports, requiring schools to prepare formal corrective action plans, tracking audit deficiencies for discussion, and making audit results a criteria in principal evaluations.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5-C.1	Strengthen controls over the bi-annual physical inventory that is organized by the fixed asset accountant.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5-C.2	Require that the serial number, asset number, and model number be placed on the surplus equipment form so that this data can be captured and used by the fixed asset accountant to remove surplus assets from the fixed assets system.	\$0	\$0	\$0	\$0	\$0	\$0	\$0

### FISCAL IMPACT SUMMARY (Cont'd)

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 5: FINANCIAL MANAGEMENT</b>								
5-D.1	Use imaging and e-mail technology to send journal vouchers and related supporting documentation to Metropolitan Nashville Government's Accounting Department, and discontinue using the FASTpak to send paper documents through interoffice mail.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5-E.1	Require the public to pay in advance for field trips and school facility rentals.	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000	\$0
5-F.1	Use prepaid business credit cards to distribute Basic Education Program funds, and eliminate the practice of adding funds to teacher paychecks at the beginning of each school year.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5-G.1	Configure the Web Requisition system for limited access for charter schools to initiate electronic purchase requisitions.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5-H.1	Issue purchase orders for all contracted vendors and eliminate direct pay.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5-I.1	Strengthen the contractor performance evaluation process by establishing written procedures and tools, and centralize retention of the evaluations.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Totals—Chapter 5</b>		<b>\$5,000</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$25,000</b>	<b>\$0</b>

## Management Response

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
Management of Metropolitan Nashville Public Schools should:			
5-A.1	Use a risk-based audit approach to plan the nature, timing, and extent of audit procedures; select audit samples; and allocate staff resources.	<b>Accept.</b> A risk assessment was completed in September 2014 and used to plan the nature, timing, and extent of audit procedures for the 2014-2015 school year. Auditors attended two days of training to learn how to develop risk assessments, calculate materiality limits and develop sample sizes based on risk and materiality of the auditee. This risk-based format will ensure staff resources are allocated properly.	December 2014
5-B.1	Enforce accountability for addressing and resolving internal school fund audit findings by conducting follow up audits, including principal responses in audit reports, requiring schools to prepare formal corrective action plans, tracking audit deficiencies for discussion, and making audit results a criteria in principal evaluations.	<b>Partially Accept.</b> Documented audit responses from principals are required for all audit findings beginning with the fiscal year ending June 30, 2014. Responses are reviewed by Executive Lead Principals, officers and Internal Audit manager for completeness. Formal corrective action plans will be required for significant or recurring audit findings.  Internal Audit is tracking audit deficiencies, and follow-up audits are being performed. To date, six follow-up audits have been completed. Audit results are already incorporated into the Tennessee Educator Acceleration Model (TEAMTN) Administrator Evaluation Rubric with Standard D3.	July 2014  Ongoing, begun September 2014
5-C.1	Strengthen controls over the bi-annual physical inventory that is organized by the fixed asset accountant.	<b>Accept</b> Because of the difficulty the fixed asset accountant has in gathering returned reports and updating the physical inventory reports for the capital asset system, these items are going to be added to the physical inventory of sensitive items completed annually by the Inventory Team. This transition is scheduled to begin January 2015.	July 2015
5-C.2	Require that the serial number, asset number, and model number be placed on the surplus equipment form so that this data can be	<b>Partially Accept</b> These information items are already included on the surplus	November 2014

## Management Response

FINANCIAL MANAGEMENT

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
	captured and used by the fixed assets clerk to remove surplus assets from the fixed assets system.	equipment form; however, MNPS has updated this form to show these information items as required fields to be completed.	
5-D.1	Use imaging and e-mail technology to send journal vouchers and related supporting documentation to Metropolitan Nashville Government's Accounting Department, and discontinue using the FASTpak to send paper documents through interoffice mail.	<b>Partially Accept</b> Upon inquiry to the Metropolitan Nashville Government's Finance Department in September 2014, MNPS found this change is not currently an option. MNPS management will work with Metropolitan Government's Finance and Information Technology Services Departments to explore other options.	TBD
5-E.1	Require the public to pay in advance for field trips and school facility rentals.	<b>Reject (Field Trips)</b> Field trips are not based on a flat rate scale and therefore cannot be pre-billed. Field trips are billed based on driver hours and miles driven. This cannot always be determined ahead of time, so billing cannot take place until after the field trip. Field trips are only engaged by schools and teachers for the students under their care. The public does not use MNPS buses.  <b>Reject (School Facility Rental)</b> Organizations that use MNPS facilities are required to pay in advance for the cost of rental prior to use. This excludes personnel costs for custodial and food services, which are billed afterward. MNPS custodial service is outsourced and must be approved by the renter after each event before any billing occurs. Food service costs are difficult to pre-bill as well because they are billed on actual hours used. To avoid over billing, MNPS bills for the actual cost after each event.	N/A
5-F.1	Use prepaid business credit cards to distribute Basic Education Program funds, and eliminate the practice of adding funds to teacher paychecks at the beginning of each school year.	<b>Reject</b> The accountability and documentation required for credit card use to spend BEP funds would be the same as the current process (card issue and maintenance administration, card usage tracking for fraudulent/unauthorized use or compromise, receipt collection and audit for authorized expenditures, etc.), so credit	N/A

## Management Response

FINANCIAL MANAGEMENT

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		cards offer no benefit in that regard. The financial benefit (rebate) from card usage would be approximately \$2,000 per year, which is more than offset by the additional administrative burden to issue, track, reconcile, and close out credit cards (based on the current administrative requirements for district p-cards).	
5-G.1	Configure the Web Requisition system for limited access for charter schools to initiate electronic purchase requisitions.	<b>Reject</b> Providing charter schools with access to the MNPS systems for requisition/purchase includes both the web requisition system (for requisition entry and approval) and the Oracle Enterprise One system (for purchase order approval, print and mail, recording receipts, and generating purchase order and financial reconciliation reports). MNPS currently prohibits access to these systems by charter schools (or any other non-Metro legal entity) because the systems do not have user access profile restrictions to prevent a charter school from accessing and manipulating MNPS financial data. Conservatively, the cost to install system logic that ensures restricted access by charter schools would be approximately \$85,000. This figure may be significantly understated as the magnitude and breadth of system code that would be impacted by this change (and need secondary re-writing) is unknown.	N/A
5-H.1	Issue purchase orders for all contracted vendors and eliminate direct pay.	<b>Partially Accept</b> As noted in the report, there are some contracted vendors with whom purchase orders yield no benefit (utilities, banks, charter schools, employee benefit providers, etc.). A systematic collaboration between Purchasing, Accounts Payable, and selected departments has already reduced direct pay expenditures to the non-utility vendors shown in Exhibit 5-10 to half the cumulative amount shown in the Exhibit.	July 2015

## Management Response

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
5-1.1	Strengthen the contractor performance evaluation process by establishing written procedures and tools, and centralize retention of the evaluations.	<p><b>Accept</b></p> <p>A written policy and procedure for contract management will be created that prescribes and documents contracted vendor evaluation.</p>	April 2015

## CHAPTER 6 – FACILITIES MANAGEMENT

### BACKGROUND

Effective facilities use and management processes consider the educational program needs, type, age, and configuration of owned, leased, and operated facilities. Effective processes enable school districts to plan, finance, and implement changes. A comprehensive program of facilities, custodial, and energy management coordinates all physical resources within a school system. Such a program effectively integrates facilities planning with all other aspects of school planning. Facilities personnel are also involved in design and construction activities and they are knowledgeable about operations and maintenance activities.

To be effective, facilities managers must also be involved in a school system's strategic planning activities. In addition, effective facility departments operate under clearly defined policies, procedures, and activities that can be adapted to accommodate changes in resources and needs.

With 82,863 students during 2013–2014, Metropolitan Nashville Public Schools (the School System) is the 42nd largest school district in the country. The School System maintains 2,000 acres and 200 buildings with more than 14,000,000 square feet of indoor space, including more than 5,000 classrooms. The value of land, buildings, equipment, and improvements total more than \$779,000,000. During 2013–2014, the School System's 157 campuses:

- elementary (grades PK-4) – 73;
- middle (grades 5-8) – 33;
- high (grades 9-12) – 25;
- alternative – 4;
- exceptional education – 4; and
- charter schools – 18.

### CHAPTER HIGHLIGHTS

- A comprehensive facility master plan and a deferred maintenance plan will provide strategic direction for prioritizing and funding future projects.
- The implementation of a comprehensive plan to optimize facility utilization in all clusters will reduce the number of overcrowded and underutilized schools.
- The absence of a staff allocation model contributes to ineffective distribution of workloads and lower productivity.
- Maintenance can further improve efficiency and productivity by moving to a five geographic zone approach to deploy staff to work sites.
- Hiring an in-house energy manager to coordinate energy management programs and continuously evaluate energy use would help to reduce costs.
- By implementing an energy conservation program, the School System can potentially save an estimated \$973,818 annually.
- Estimates from a national facilities management outsource provider suggest that the School System could potentially save an average of \$7,218,977 annually, beginning in 2015-2016, if the department was outsourced.

Schools are geographically organized according to cluster patterns. A “cluster” is a group of elementary and middle schools that “feed” to a single high school in close proximity. The School System has 12 clusters that correspond to each high school; however, some middle schools feed into more than one high school—depending on zoning and transportation issues.

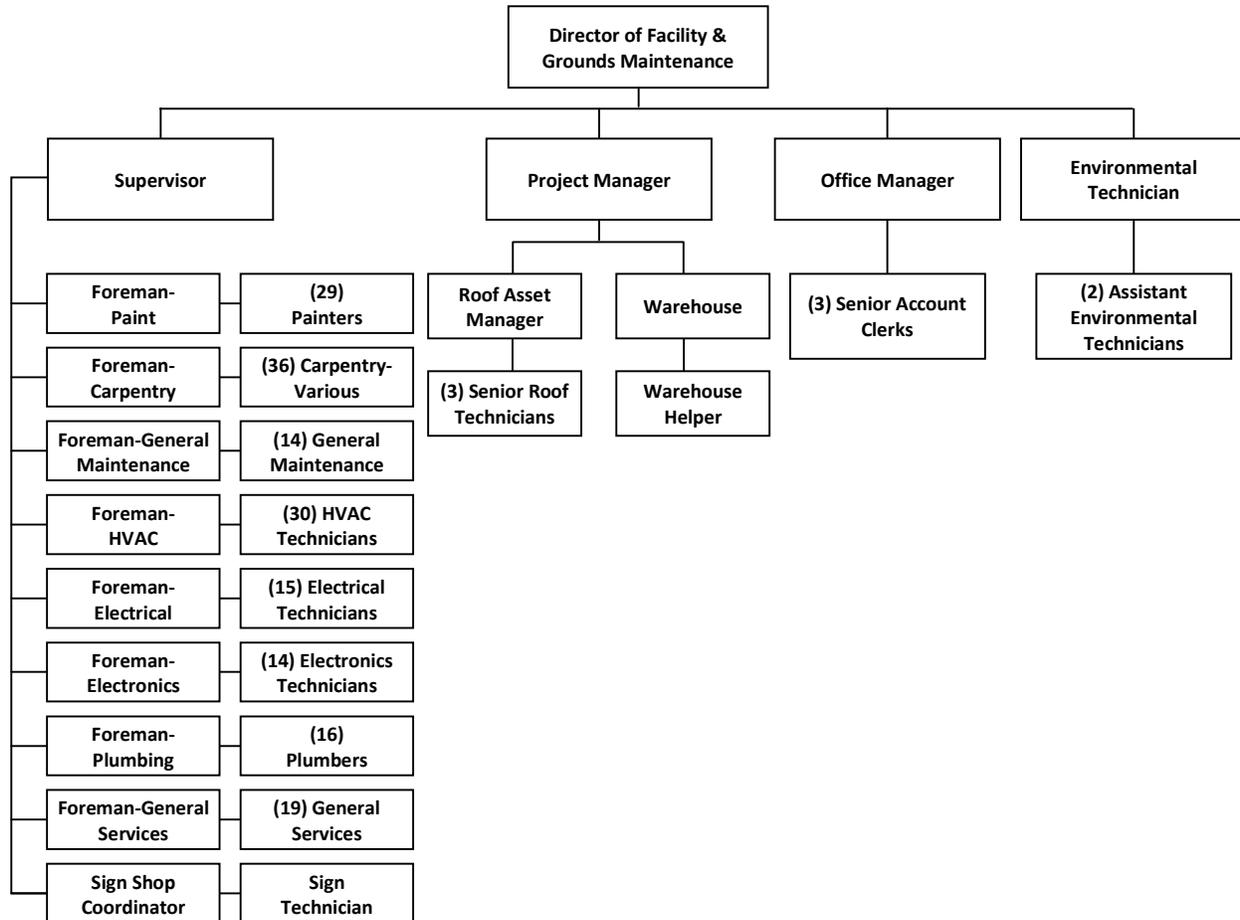
The School System’s Facility & Grounds Maintenance and Facility Planning & Construction Departments are responsible for facilities maintenance and planning, construction, and renovation functions. The Facility & Grounds Maintenance Department consists of 199 employees. Custodial and grounds services (excluding athletic fields) are outsourced. There are five full-time and two part-time employees in the Facility Planning & Construction Department. Facility Planning & Construction has been augmented by a contract project management firm for over 15 years.

The department began using the contractor’s complete construction process in 2011. Through this effort, the School System selected project managers, and the contractor trained them on the project management processes, monitored, and coached their efforts. Project management plans and project master schedules are developed by the department’s project managers and are reviewed by the contractor. The contractor also provides assistance with cost estimates, constructability reviews, specification sections, and technical evaluations. Cost-loaded schedules, and the monthly revisions submitted with pay applications, are reviewed by both the department and contractor. At the conclusion of the project, a project evaluation form should be completed to evaluate the design and construction team and the overall results.

The Student Assignment Services Department serves as a support function for the School System. Student Assignment Services staff help to assure the best use of school building capacity. This is done by reviewing the school attendance boundaries and administering the school choice plan to allow students to attend an optional school.

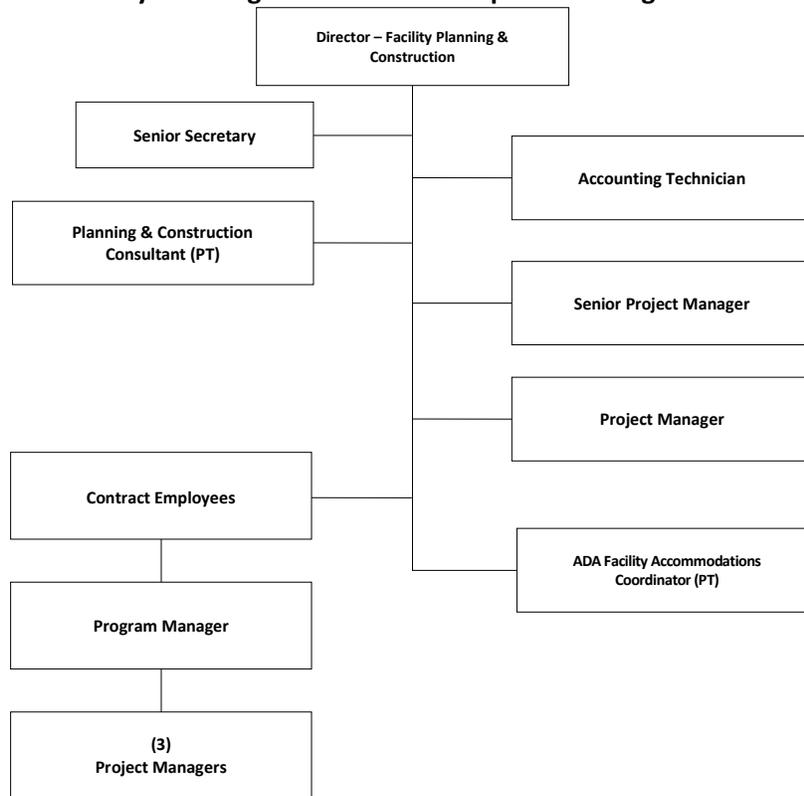
**Exhibits 6-1** and **6-2** represent the department organizations. The directors report to the chief financial officer.

**Exhibit 6-1**  
**Facility & Grounds Maintenance Department Organization**



Source: Metropolitan Nashville Public Schools, Facility & Grounds Maintenance Department, February 2014.

**Exhibit 6-2  
Facility Planning & Construction Department Organization**



Source: Metropolitan Nashville Public Schools, Facility & Grounds Maintenance Department, February 2014.

Exhibit 6-3 shows the actual operating expenses for the past two years and the current year’s budget.

**Exhibit 6-3  
Facility & Grounds Maintenance and Facility Planning & Construction Departments  
Actual Expenses 2011-2012 and 2012-2013 and Budget 2013-2014**

Description	Actual 2011-2012	Actual 2012-2013	Budget 2013-2014
<b>Facilities Maintenance Staff</b>			
Salaries, Support	7,189,167	7,556,490	7,810,400
Supplemental Earnings	601,717	359,425	438,200
FICA, Medicare, Pension & Insurance	3,440,551	3,637,868	3,771,600
Supplies and Materials	3,413,077	3,562,682	3,704,700
Other Expenses	2,008,593	1,570,220	1,426,900
Travel/Mileage	6,554	6,599	2,000
Contracted Services	317,429	185,397	340,400
<b>Subtotal – Facilities Maintenance Staff</b>	<b>\$16,977,088</b>	<b>\$16,878,681</b>	<b>\$17,494,200</b>
<b>Maintenance Supervision</b>			
Salaries, Support	350,809	328,935	136,300
Supplemental Earnings	3,841	1,774	275,100
FICA, Medicare, Pension & Insurance	147,512	137,637	185,500
Supplies and Materials	5,564	5,570	7,500
Travel/Mileage	0	113	2,000
<b>Subtotal – Maintenance Supervision</b>	<b>\$507,726</b>	<b>\$474,029</b>	<b>\$606,400</b>

**Exhibit 6-3  
Facility & Grounds Maintenance and Facility Planning & Construction Departments  
Actual Expenses 2011-2012 and 2012-2013 and Budget 2013-2014 (Cont'd)**

Description	Actual 2011-2012	Actual 2012-2013	Budget 2013-2014
<b>Facility Planning &amp; Construction Staff/Supervision</b>			
Salaries, Support	333,564	348,260	244,600
Supplemental Earnings	0	0	124,100
FICA, Medicare, Pension & Insurance	126,990	139,935	145,100
Supplies and Materials	1,582	3,150	6,400
Other Expenses	676	895	3,600
Travel/Mileage	8,789	6,363	11,600
Contracted Services	2,220	2,443	0
<b>Subtotal – Facility Planning &amp; Construction Staff/Supervision</b>	<b>\$473,821</b>	<b>\$501,046</b>	<b>\$535,400</b>
<b>Grand Total</b>	<b>\$17,958,635</b>	<b>\$17,853,756</b>	<b>\$18,636,000</b>

Source: Metropolitan Nashville Public Schools, Facility & Grounds Maintenance Department, February 2014.

Exhibit 6-4 provides a summary of the School System's core academic schools inventory by cluster.

**Exhibit 6-4  
Metropolitan Nashville Public Schools  
Total School Square Footage Inventory by Cluster**

Cluster Name	Average Age	Permanent Square feet	Square Ft of Portables	Gross Square Ft	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization
Antioch Cluster	24	1,058,695	38,000	1,096,695	50	8,193	8,000	102%
Overton Cluster	42	965,185	58,520	1,023,705	77	7,935	7,978	99%
Hillsboro Cluster	60	846,589	12,160	858,749	16	4,904	5,055	97%
Cane Ridge Cluster	22	872,329	29,640	901,969	39	6,197	6,496	95%
McGavock Cluster	44	1,548,022	13,680	1,561,702	18	9,595	10,216	94%
Lottery Schools	52	1,377,605	3,800	1,381,405	5	8,307	8,879	94%
Hunters Lane Cluster	48	1,001,696	23,560	1,025,256	31	6,782	7,412	92%
Hillwood Cluster	43	704,642	9,880	714,522	13	4,993	5,459	91%
Glenclyff Cluster	43	959,169	16,720	975,889	22	5,987	6,628	90%
Pearl-Cohn Cluster	43	805,096	0	805,096	0	3,654	4,336	84%
Maplewood Cluster	40	808,772	760	809,532	1	3,998	5,617	71%
Stratford Cluster	59	840,623	1,520	842,143	2	3,621	5,119	71%
Whites Creek	33	664,263	760	665,023	1	3,070	4,829	64%
<b>Subtotal Core Schools</b>		<b>12,452,686</b>	<b>209,000</b>	<b>12,661,686</b>	<b>275</b>	<b>77,236</b>	<b>86,024</b>	<b>90%</b>
Special Program Schools	33	262,675	6,080	268,755	8	5,942	N/A	N/A
Special Schools	43	431,289	0	431,289	0	876	N/A	N/A
Undesignated	78	21,400	0	21,400	0	0	N/A	N/A
<b>Subtotal Special Schools</b>		<b>715,364</b>	<b>6,080</b>	<b>721,444</b>	<b>8</b>	<b>6,818</b>	<b>N/A</b>	<b>N/A</b>
<b>TOTAL</b>		<b>13,168,050</b>	<b>215,080</b>	<b>13,383,130</b>	<b>283</b>	<b>84,054</b>	<b>N/A</b>	<b>N/A</b>

Source: Student Assignment Services Department and Facility Planning & Construction Department, December 2014.

**Exhibit 6-5** presents a summary of the school and administrative building inventory including leased charter school buildings for which maintenance staff should provide limited major repairs such as a roof leak repair.

**EXHIBIT 6-5  
Metropolitan Nashville Public Schools  
Total Facilities Square Footage Inventory**

Facility	Age	Perm. Bldg. Area (Sq. Ft.)	Present Use
<b>SCHOOLS BUILDINGS</b>		<b>13,168,050</b>	
<b>CLASSROOM PORTABLE BUILDINGS</b>		<b>215,080</b>	
<b>SUBTOTAL SCHOOLS AND PORTABLES</b>		<b>13,383,130</b>	
<b>SUPPORT BUILDINGS</b>			
Bransford Administration Bldg.	72	83,710	Central Office
Martin Professional Development Ctr.	78	44,568	Training
McGruder Family Res. Ctr. (Old J. Early)	74	34,044	
Operations Bldg. (Central Office)	61	46,004	Operations Staff
Print Shop Bldg. (Central Office)	Unknown	6,000	Print Staff
Supply Center	50	55,965	
Transportation	42	44,100	Transportation Staff
Waverly-Belmont IT Center	79	33,776	Technology Staff
Central Alumni Bldg.	64	7,200	
Dalewood (East End Preparatory)	65	108,760	First Floor. Other for Charter School
Hickman (old) Elem. (Spectrum of TN)	57	40,095	
Joelton Middle (was closed for construction)	75	78,647	
Rose Park (was closed for construction)	49	92,905	
Stokes Middle (Lipscomb Univ./FG&M)	78	29,247	
McCann (Nashville Preparatory)	78	21,106	One floor or .5 of 42,211 square feet
Non-classroom portables	Unknown	45,600	
<b>SUBTOTAL BUILDINGS MAINTAINED</b>		<b>14,154,857</b>	
<b>OTHER BUILDINGS NOT MAINTAINED *</b>			
Baxter ALC (Liberty Collegiate Acad.)	104	50,361	Leased to Charter School
Brookmeade (LEAD Academy Middle)	57	49,405	Leased to Charter School
Ewing Park (KIPP Academy)	46	83,830	Leased to Charter School
McCann (Nashville Preparatory)	78	21,105	Leased to Charter School-.5 of 42,211 square feet
Facility & Grounds Maintenance	Leased	44,538	Facilities Staff
<b>GRAND TOTAL BUILDING INVENTORY</b>		<b>14,404,096</b>	

Source: Metropolitan Nashville Public Schools-School Building Inventory List, September 2013, Facility & Grounds Maintenance Department, February 2014.

\*The Facility & Grounds Maintenance Department provides maintenance on a fee for service basis.

## BEST PRACTICES

Best practices are methods, techniques, or tools that have consistently shown positive results, and can be replicated by other organizations as a standard way of executing work-related activities and processes to create and sustain high-performing organizations. When comparing best practices, similarity of entities or organizations is not as critical as it is with benchmarking. In fact, many best practices transcend organizational characteristics.

McConnell Jones Lanier & Murphy LLP (or the review team) identified 24 best practices against which to evaluate facilities management of the School System. Fourteen out of 24 best practices were met.

**Exhibit 6-6** provides a summary. Best practices that the School System does not meet results in observations, which we discuss in the body of the chapter. However, all observations included in this chapter are not necessarily related to a specific best practice.

**Exhibit 6-6**  
**Summary of Best Practices – Facilities Management**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
1.	The school system has an effective long-range facilities planning process in place. When developing the annual five-year facilities work plan, the school system evaluates alternatives to minimize the need for new construction and establishes budgetary plans and priorities.		X	Although some components of a facility master plan have been completed, a formal long-range facilities master plan has not been completed. Metropolitan Nashville Public Schools has completed certain planning processes such as the Capital Improvement Budget, enrollment trends and other planning data, yet the system lacks a comprehensive facilities master plan. <b>See Observation 6-A.</b>
2.	The school system has an appropriate organizational structure for the maintenance and operations program and minimizes administrative layers and assures adequate supervision.	X		The department has appropriate layers of management for the number of employees.
3.	The school system has established and implemented accountability mechanisms to ensure the performance, efficiency, and effectiveness of the construction program including post-occupancy evaluations of major construction projects.		X	A post-occupancy evaluation tool has not been developed and implemented. <b>See Observation 6-B.</b>

**Exhibit 6-6  
Summary of Best Practices – Facilities Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
4.	The school system has processes and procedures in place to ensure facilities are efficiently-utilized, based on geographical enrollment patterns.		X	Building inventory includes over and underutilized buildings. The School System has 283 portables in total, of which 275 are assigned to core schools. Maintaining this number of portables may indicate the need for even more aggressive renovation and/or construction of new schools. <b>See Observation 6-C.</b>
5.	The school system uses a staff allocation model to ensure appropriate staffing levels.		X	No staff allocation method is developed and documented. <b>See Observation 6-D.</b>
6.	The school system deploys its maintenance staff resources to geographic locations efficiently and cost effectively.		X	The School System has deployed some of its trade staff by geographic area/zone; however, this operational practice needs to be expanded. Resources generally are not deployed by geographic location. <b>See Observation 6-E.</b>
7.	Accurate and timely demographic projections are performed by the school system to support long-range facilities planning for schools.	X		The School System's Student Assignment Services Department performs this function.
8.	The school system ensures responsiveness to the community through open communication about the construction program and the five-year facilities work plan.	X		Metropolitan Nashville Public Schools has a Capital Improvement Budget, which it uses to communicate progress on large renovation and construction projects. However, there is no construction status on the website.

**Exhibit 6-6**  
**Summary of Best Practices – Facilities Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
9.	The school system has an effective site selection process based on expected growth patterns.	X		A group within Leadership & Learning along with the Student Assignment Services and Facility Planning & Construction Departments establish a need for additional capacity within a region of the School System based on enrollment projections (typically 5 and 10 year targets). Once this group determines the target area, Facility Planning & Construction works with Metropolitan Nashville Government to identify available parcels, and through Metropolitan Nashville Government Legal and Real Estate Departments, to work toward land acquisition. Ultimately, the proposed sale is reviewed by the director of schools and chief financial officer, and then recommended to the Board of Education, prior to seeking approval from Metropolitan Nashville Council.
10.	The school system performs facilities studies to evaluate condition, identify deficiencies and aid in prioritizing deferred maintenance and renovation projects.	X		The School System engages an experienced contractor, MGT of America, through the oversight of the Facility Planning & Construction Department to conduct a comprehensive assessment of facilities condition and provides an objective score for each of its facilities, which is a major component of the planning process.
11.	The school system develops thorough descriptions and educational specifications for each construction project.	X		The School System's Facility Planning & Construction Department performs this function.
12.	The school system has effective management processes for construction projects.	X		The School System uses a national project management company, Heery International, Inc., during pre-construction and construction phases to assist with project management and oversight.

**Exhibit 6-6  
Summary of Best Practices – Facilities Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
13.	The school system retains appropriate professionals to assist in facility planning, design, and construction.	X		The School System uses a national project management company, Heery International, Inc., to augment internal staff. This practice has proven to be more cost-effective for the School System.
14.	The school system has established and implemented accountability mechanisms to ensure the performance and efficiency of the custodial operations.	X		Custodial operations and non-athletic grounds maintenance are outsourced. Contract requires monthly principal report cards of custodial services and monthly customer satisfaction grounds surveys.
15.	The school system has established and implemented accountability mechanisms to ensure the performance and efficiency of maintenance operations.		X	Standard management reports are not fully utilized although they are available from the SchoolDude automated work order system. <b>See Observation 6-F.</b>
16.	The department has an effective preventative maintenance program in place. The school system uses proactive maintenance practices to reduce maintenance costs.		X	Preventative maintenance program requires improvement. <b>See Observation 6-G.</b>
17.	The department has an effective deferred maintenance program in place.		X	Deferred maintenance projects are documented and potential costs are compiled; however no formal program is in place. <b>See Observation 6-H.</b>
18.	The department maintains educational and district support facilities in a condition that enhances student learning and facilitates employee productivity.	X		The School System's Facility & Grounds Maintenance Department demonstrated evidence that it regularly dispatches maintenance staff to educational and support facilities in an effort to provide appropriate maintenance. The review team toured 32 schools during the onsite visit and found all to be in generally good condition.
19.	The school system provides a staff development program that includes appropriate training for maintenance and operations staff to enhance worker job satisfaction, efficiency, and safety.		X	A comprehensive training plan is needed. <b>See Observation 6-I.</b>

**Exhibit 6-6  
Summary of Best Practices – Facilities Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
20.	The administration has developed an annual budget with spending limits that comply with funding for each category of facilities maintenance and operations.	X		The Facility & Grounds Maintenance Department performs this function in conjunction with the Finance Department.
21.	School system personnel review maintenance and operation's costs and services and evaluate the potential for outside contracting and privatization.	X		Custodial and non-athletic grounds services have been outsourced.
22.	A computerized control and tracking system is used to accurately track work orders.	X		The SchoolDude automated work order system is used to manage work order requests.
23.	The Maintenance & Operations Department has a system for prioritizing maintenance needs uniformly throughout the school system.	X		The SchoolDude automated work order system is used to facilitate prioritizing maintenance needs.
24.	The school system has a comprehensive energy management program in place to conserve energy and contain costs.		X	There is no formal Energy Management program or energy manager. Also, four heating ventilation and air conditioning (HVAC) systems with various levels of automated capabilities are maintained. In addition, the facility services contract indicates that they were hired to develop the energy management program, but this portion of the contract has not been implemented. <b>See Observation 6-J.</b>

Source: McConnell Jones Lanier & Murphy LLP Review Team.

## ACCOMPLISHMENTS

### ACCOMPLISHMENT 6-A

During 2010-2011, the School System saved \$6,522,900 by reducing operating costs because of outsourcing custodial and non-athletic grounds functions and increased projected annual savings to \$8,198,643 by 2012-2013. By outsourcing custodial and grounds keeping operations, the School System saved funds that it can redirect to its educational programs.

The School System issued a Request for Proposals in March 2010, selected a custodial and grounds vendor, and executed a contract with in May 2010 to provide these services. The original base contract was valued at \$22,668,100 per year for five years, and amended to \$23,259,660 per year beginning July 1, 2012. **Exhibit 6-7** presents the School System’s projected annual cost savings for 2010-2011 through 2012-2013.

**Exhibit 6-7**  
**Metropolitan Nashville Public Schools**  
**Projected Savings for Outsourced Custodial and Grounds Services**

Description	Estimated Internal Cost versus Actual Costs		
	2010-2011	2011-2012	2012-2013
School System’s Internal Estimated Cost of Operations	\$ 29,191,000	\$ 29,191,000	\$ 29,919,429
School System’s Estimated Salary, Benefits, Supplies Cost Increase	0	728,429	1,483,669
<b>Total MNPS Estimated Internal Costs*</b>	<b>\$ 29,191,000</b>	<b>\$ 29,919,429</b>	<b>\$ 31,403,098</b>
Cost of contract*	22,668,100	22,712,865	23,204,455
<b>Total Projected Annual Savings</b>	<b>\$ 6,522,900</b>	<b>\$ 7,206,564</b>	<b>\$ 8,198,643</b>

Source: Metropolitan Nashville Public Schools, Facility & Grounds Maintenance Department, February 2014.

\*Actual expenditures for 2012-2013 provided by Metropolitan Nashville Public Schools, Budget & Financial Reporting Department, August 2014.

The custodial and grounds maintenance contract requires the vendor to complete a monthly “Report Card” for custodial services to maintain measurable performance standards. Either principals or the building administrator grade the monthly report cards to provide feedback on the quality and responsiveness of the vendor’s performance for cleaning hallways, classrooms, cafeterias, restrooms, and other issues raised by building management. The Facility & Grounds Maintenance Department records the feedback for the report cards and trends, which management uses to develop action plans to address any service-level deficiencies noted. Also, principals are required to submit monthly grounds management customer satisfaction surveys to measure the level of satisfaction with services provided by the grounds maintenance vendor.

As shown in **Exhibit 6-8**, 71.8 percent of central administrators, 87.5 percent of principals/assistant principals, and 59.9 percent of teachers, respectively, felt that schools throughout the School System are clean.

**Exhibit 6-8  
Custodial Maintenance Survey Results**

Question	Percentage Responses				
	Number of Survey Respondents	Agree/ Strongly Agree or Somewhat Agree	Disagree or Strongly Disagree	N/A	Total
<b>Schools are clean.</b>					
<b>Survey Group</b>					
Central Administrators	62	71.8%	17.2%	11.0%	100.0%
Principals/Assistant Principals	104	87.5%	12.5%	0.0%	100.0%
Support Staff	438	67.3%	29.5%	3.2%	100.0%
Teachers	1,208	59.9%	39.0%	1.1%	100.0%

Source: McConnell Jones Lanier & Murphy LLP Surveys of Central Administrators, Principals/Assistant Principals, Support Staff, and Teachers, May 2014.

**ACCOMPLISHMENT 6-B**

**The School System has been awarded the U. S. Green Building Council Leadership in Energy & Environmental Design (LEED) Program Silver Certification for eight of its 19 building construction projects that have either been completed or that are underway.**

**Exhibit 6-9** shows the eight construction projects that have received the certification as a result of the efforts of the School System’s Facility Planning & Construction Department. In addition to the certifications that have been awarded, the process is in progress for nine additional construction projects. The School System has participated in Tennessee Efficient Schools Initiative grants valued at \$1,500,000 for energy savings, retrofits, energy audits, and analysis of schools.

**Exhibit 6-9  
Metropolitan Nashville Public Schools Construction Projects Achieving  
Leadership in Energy & Environmental Design Silver Certification**

School	Type	Year
Harpeth Valley Elementary	New Construction	2010
Julia Green Elementary	Addition	2010
Churchwell Elementary	Renovation	2012
Madison Middle	Renovation	2012
Litton Middle	Renovation/Addition	2013
Cane Ridge Elementary	New Construction	2014
Gateway Elementary	Renovation/Addition	2014
Rose Park Middle	Renovation	2014

Source: Metropolitan Nashville Public Schools Facility Planning & Construction Department, December 2014.

The Leadership in Energy & Environmental Design program is an initiative of the U.S. Green Building Council that focuses on encouraging a more sustainable approach to the way buildings are designed, constructed and operated. To attain Silver Certification for new construction and major renovations, the program has five main categories and a project must earn a total of 50 to 59 points. **Exhibit 6-10** presents the evaluation categories and criteria.

**Exhibit 6-10  
Leadership in Energy & Environmental Design Program  
Silver Certification Evaluation Criteria for Certification**

<b>Evaluation Category</b>	<b>Criteria</b>	<b>Total Possible Points</b>
<b>Sustainable Sites</b>	<ul style="list-style-type: none"> <li>The prerequisite for the Sustainable Sites category aims to curtail pollution and soil erosion that often result from construction.</li> <li>This category also offers points for strategies toward cultivating overall sustainability. For instance, a project wins points for choosing an urban or brownfield site rather than a previously undeveloped area.</li> <li>This category also pertains to the building's direct environmental impact on the immediate area.</li> </ul>	26
<b>Water Efficiency</b>	<ul style="list-style-type: none"> <li>The prerequisite requires for the building to use 20 percent less water than the U.S. Green Building Council baseline for buildings of similar size and occupation.</li> <li>A project garners further points for going substantially beyond this 20 percent reduction in water use, as well as implementing further water conservation measures that pertain to landscaping and wastewater technologies.</li> </ul>	10
<b>Energy and Atmosphere</b>	<ul style="list-style-type: none"> <li>This category focuses mainly on building commissioning and the energy performance of main systems such as heating, ventilating, and air conditioning and lighting.</li> <li>It entails three prerequisites: the building must be fundamentally commissioned (commissioning a building involves the testing and balancing of the main systems to assure optimum performance), use at least 10 percent less energy than the U.S. Green Building Council baseline, and contain systems that do not use any chlorofluorocarbon based refrigerants.</li> <li>Extra points go for progressing further than prerequisite dictates in these areas as well as for the use of renewable energy sources for building operation.</li> </ul>	35
<b>Materials and Resources</b>	<ul style="list-style-type: none"> <li>This category deals with reuse and recycling of materials, both in the construction and the ongoing operation of the building.</li> </ul>	14
<b>Indoor Environmental Quality</b>	<ul style="list-style-type: none"> <li>This category deals mainly with indoor air quality issues including ventilation and off-gassing of materials and thermal comfort.</li> <li>This category also deals with the need for lighting systems to be energy efficient as well as adequate for all necessary tasks.</li> </ul>	15
<b>Total Points</b>		<b>100</b>

Source: *Requirements for Leadership in Energy & Environmental Design Silver Certification*, eHow website, [http://www.ehow.com/list\\_7320789\\_requirements-lead-silver-certification.html](http://www.ehow.com/list_7320789_requirements-lead-silver-certification.html)

Given the rigorous evaluation criteria construction and renovation projects must meet to achieve Leadership in Energy & Environmental Design Silver Certifications, the School System's Facility Planning & Construction Department is demonstrating a strong commitment to strengthening energy management practices by applying for and earning these awards.

**ACCOMPLISHMENT 6-C**

In October 2011, the School System's Facility & Grounds Maintenance Department in conjunction with the Metropolitan Nashville Government Health Department completed radon testing in all Metropolitan Nashville Public Schools' buildings. Eighty out of the 139 School System buildings (excludes charter schools) at that time had elevated radon levels in one or more rooms.

Remediation work was completed and tests showed radon levels in these buildings were all within acceptable levels within the time period required by Metropolitan Nashville Government Ordinance, October 27, 2013. The work involved testing more than 8,000 rooms and providing radon mitigation activities at an approximate cost of \$108,164.

## DETAILED OBSERVATIONS

### PLANNING

#### OBSERVATION 6-A

**The School System has completed components of a facilities master plan; however, a formal, comprehensive long-range facilities master plan has not been developed.**

A facilities master plan is critical to the overall success of a school system’s operations. A master plan assesses needs and facility deficiencies, and coordinates educational programs with the availability of physical space and resources. It also establishes a formal, written vision and road map for future facilities plans into one comprehensive document.

In the absence of a formal facilities master plan, the School System uses its Capital Improvement Budget process to serve as its primary facilities planning tool. Major responsibility for preparing the capital budget is shared by the School System’s chief financial officer (primary coordinator of the effort), the Student Assignment Services Department and the Facility Planning & Construction Department. Other School System departments that provide critical input to the capital budget process are listed in **Exhibit 6-11**.

**Exhibit 6-11  
Metropolitan Nashville Public Schools  
Departmental Contributors to Capital Budget Process**

Department	Input
Facility & Grounds Maintenance	Specific building and districtwide deferred maintenance.
Leadership & Learning	Educational programs that impact space and furnishings.
Technology	Districtwide technology needs.
Transportation	School buses and fleet vehicles.
Nutrition Services	Specific school space and equipment needs.
Security	Cameras, alarm systems, locks, communication equipment, and security vehicles.
Athletics	Specific needs for all sports programs.
American Disabilities Act Compliance	Building modifications and fixture or equipment needs to respond to requests for accommodation.

*Source: Metropolitan Nashville Public Schools, Facility Planning & Construction Department, February 2014.*

The Student Assignment Services Department evaluates and projects facility capacity needed at each school and in each cluster of the School System—analyzing critical factors such as demographic trends, current and projected enrollment, program capacity of existing schools, and use of portable buildings. Additional capacity needs at existing schools are identified, along with the number of additional classrooms or other educational space requirements. Depending on the availability of land at existing schools, overcrowding at an existing school may be relieved by adding seat capacity to a nearby school through rezoning attendance boundaries. Additionally, the Student Assignment Services Department identifies geographic areas within the School System that require new school construction and participates in the selection of potential school sites. Capital requests are generated to address additional seat capacity requirements.

The Facility Planning & Construction Department is responsible for ensuring that the School System’s facilities function in a safe, healthy environment for students and staff. The two most critical responsibilities of the Facility Planning & Construction Department are the long-range planning and standardization of design and materials and ongoing comprehensive assessment of facilities condition.

The School System engages a contractor, through the oversight of the Facility Planning & Construction Department to conduct a comprehensive assessment of facilities condition. Through the facilities condition assessment, each facility is assigned an objective score that helps to determine budget requirements so necessary renovations can be planned and executed that meet or exceed the School System’s standards. The Facility Planning & Construction Department also oversees an additional major contractor, Heery International, Inc., that provides consultant services in construction project management and establishing facilities design standards.

The School System ultimately uses all of these data points to assist with the preparation of a detailed, six-year Capital Improvement Budget along with high-level capital budgets for four additional years. The capital budget is made up of a six-year list of projects, approved annually by the School System’s Board of Education. The School System’s 2014-2020 Capital Improvement Budget summary is presented in **Exhibit 6-12**.

**Exhibit 6-12**  
**Summary Total of 2014-2020 Capital Improvement Budget**

Budget Period	School Specific Projects	Districtwide Projects	Grand Total
2014-2015	\$187,760,000	\$61,595,500	\$249,355,500
2015-2016	144,575,000	48,845,500	193,420,500
2016-2017	145,285,000	44,293,500	189,578,500
2017-2018	108,850,000	46,081,000	154,931,000
2018-2019	76,950,000	33,332,500	110,282,500
2019-2020	53,625,000	39,049,000	92,674,000
<b>Cost of Six-Year Program</b>	<b>717,045,000</b>	<b>273,197,000</b>	<b>990,242,000</b>
Beyond 6 Years 2020-2024	57,364,000	120,947,000	178,311,000
<b>Grand Total: Cost of Ten-Year Program</b>	<b>\$774,409,000</b>	<b>\$394,144,000</b>	<b>\$1,168,553,000</b>

*Source: Metropolitan Nashville Public Schools, Facility Planning & Construction Department, February 2014.*

The average age of the School System’s facilities is 43 years. The most significant challenge to adequately support facilities is consistent capital funding. The School System’s capital budget process alone does not provide the scope of long-range strategic planning required for ongoing facilities improvements. **Exhibit 6-13** provides a summary of the major processes performed and deliverables typically found in a long-range facility plan and the progress the School System has made toward completing those components.

**Exhibit 6-13**  
**Model Facilities Planning Process Deliverables and**  
**Metropolitan Nashville Public Schools Planning Process Components**

Deliverables	Components Included in MNPS Planning Process
School and administrative facilities deficiencies and inefficiencies, including modernization, functionality, and spatial requirements at older schools and the School System’s administrative facilities.	The School System’s process addresses deficiencies, inefficiencies and spatial requirements of each building through the facility assessments, utilizing the MGT BASYS system (software name). This process evaluates conditions and educational suitability of each facility.
Functional equity, preservation, and upgrades to quality schools and administrative facilities.	Through the Balanced Automated Systems evaluation and report, a score for each facility is developed and priorities established.
Quality and worthiness of continued preservation of existing schools and administrative facilities.	The Student Assignment Services Department provides input regarding projected capacity and determines the need for additional facility space. The Facility Planning & Construction Department along with project specific architects, determine if the school can be renovated and upgraded, or if it should be demolished and rebuilt at the same site.
Optimal facility utilization within school clusters and individual schools.	The School System has published a utilization scale used for the capital budget planning process. The scale has five categories referenced in the map “Metropolitan Schools’ Capacities and Future Growth”. The map uses a color scheme aligned with the utilization scale to identify geographic areas most overcrowded and underutilized. This same scale was used for the Board Resolution on Charter schools to consider new charter schools in areas that are projected to have a utilization rate of 120% or higher.
Strategies to minimize portables for classroom and administrative use.	<p>The 10-year Capital Improvement Budget identifies and requests funding for school additions and new facilities to eliminate or reduce the number of portables.</p> <p>While student enrollment has consistently increased over the past eight years, growing by 10,408 students, the School System aggressively seeks capital funding to keep pace with enrollment growth. The School System has added 477 additional classrooms which has increased school capacity by 9,434 students/seats. There are six additional construction projects that will add 112 classrooms and will increase student capacity by 2,100 students/seats.</p>

**Exhibit 6-13**  
**Model Facilities Planning Process Deliverables and**  
**Metropolitan Nashville Public Schools Planning Process Components (Cont'd)**

Deliverables	Components Included in MNPS Planning Process
Strategies to minimize portables for classroom and administrative use. (Cont'd)	The School System has a comprehensive School Choice process that allows parents to pick a school that best fits the academic needs for their child. One out of four students in the School System is enrolled in an out-of- zone school. One of the many benefits of the School Choice process is improved facility utilization. There are 85 schools offered in the choice process; many of which would be significantly underutilized if their enrollment was limited to school zones. If students were required to attend their zoned school; this would increase overcrowding in the Antioch Cluster to 135% of capacity.
Strategies for addressing changing requirements of student population shifts resulting from growth and decline in neighborhoods and charter school expansion.	<p>The Student Assignment Services Department maintains both long and short-range projections, which are used to plan for population changes. In addition to the projections created by departmental staff, private software products are used to complement other School System reports such as ESRI Community Analyst.</p> <p>The School System performs various detailed studies of charter school enrollments which help to study the impact on other schools.</p> <p>School System staff has a close working relationship with the Metropolitan Nashville Planning Commission which provides collaboration on long range plans.</p>
Standards and criteria to develop the scope of facility improvements.	School System Educational Specifications, Space Standards, and Design Guidelines establish scope and requirements of facility improvements.
Lowering costs associated with small, functionally deficient schools.	Energy and maintenance costs are reduced when the facility is renovated through the Capital Budget.
Exploration of joint-use opportunities with public and private partnerships related to facilities.	The Student Assignment Services Department explores options to lease buildings and co-locate charter schools.
Administrative costs associated with implementing the plan and related benefits.	This planning component is not included in current process.
Strategies to maximize potential reductions in operation costs.	The Planning & Construction Department works closely with the Facility & Grounds Maintenance Department on building assessments to address energy and maintenance costs reductions. These annual adjustments to building assessments are developed through working sessions and are not captured as a final document.
Identification of current and future needs of district facilities and education programs.	Future facility and space needs are captured through existing process. Future educational programs and resulting facility needs are not captured.

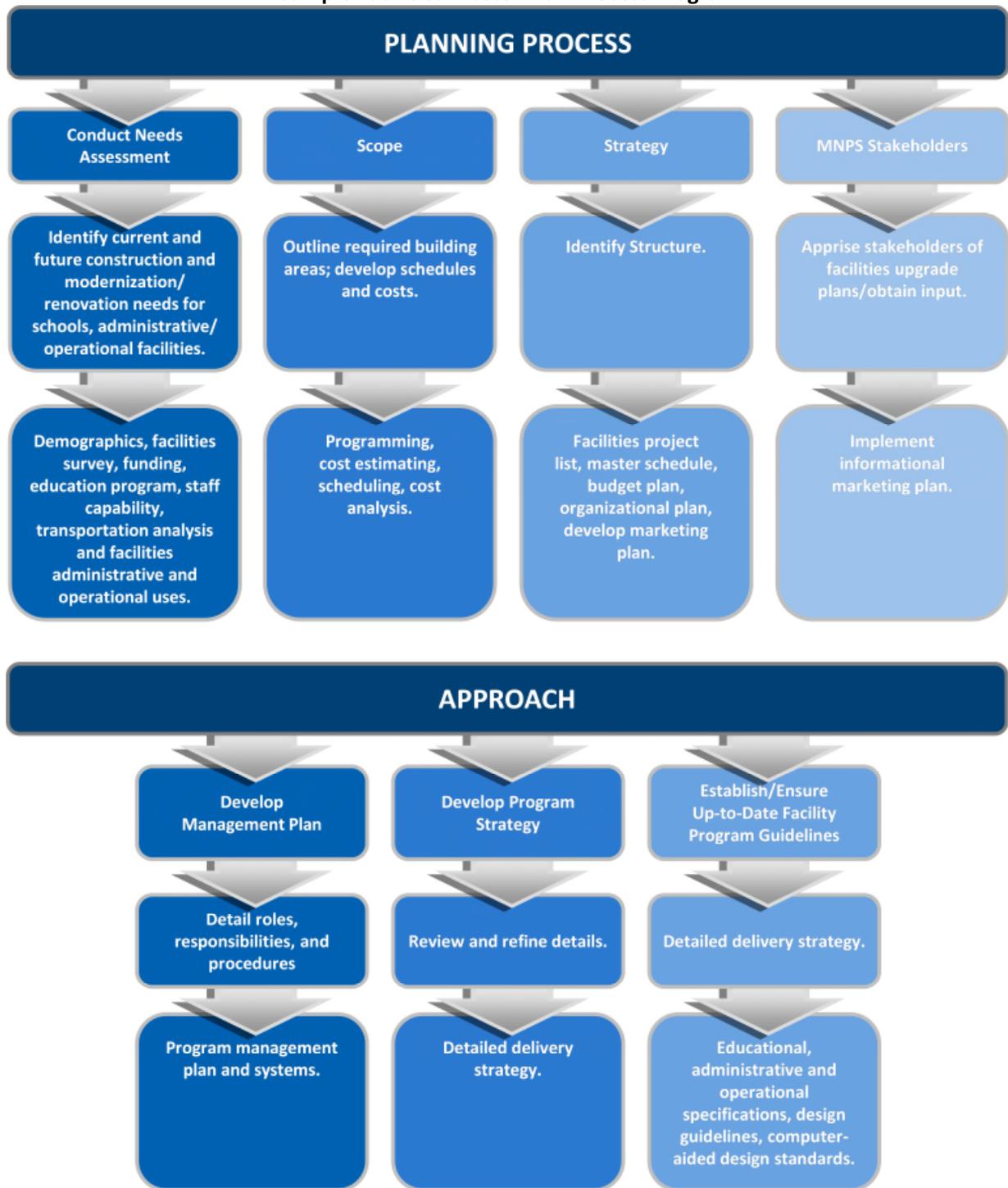
**Exhibit 6-13  
Model Facilities Planning Process Deliverables and  
Metropolitan Nashville Public Schools Planning Process Components (Cont'd)**

Deliverables	Components Included in MNPS Planning Process
Development of measurable objectives and goals.	This planning component is not included in current process.
Community input into the planning and decision-making process.	Improved communication processes are being developed jointly with the School System Board of Education, Metropolitan Nashville Council, and other Metropolitan Nashville Government departments, along with school and community participants. These are currently project specific. Systemwide communications, however, are not included.
Criteria for optimum school sizes to reduce operating costs.	This planning component is not included in current process.
Criteria for determining which facilities are obsolete and are too costly to upgrade.	This process is considered when developing the Capital Improvement Budget. Consideration includes the need for current location, community involvement within a school, and historical value of facility.
Application of programming, design, and operating criteria to assess the need and priorities for preserving and upgrading existing facilities.	Programming and design needs are considered through the Educational Specification, Space Standards, and Design Guidelines.
Provide analyses of the long-term operating costs of equipment, maintenance, and energy compared to the quality of the facility.	This planning component is not included in current process.
Comprehensive facility plan document that summarizes many of the major planning processes and includes implementation strategies and timelines.	This planning component is not included in current process.

*Source: Metropolitan Nashville Public Schools, Facility Planning & Construction Department, December 2014.*

A sample facilities planning process model is shown in **Exhibit 6-14**. This model is often used to assist school districts in developing a facilities master plan.

**Exhibit 6-14**  
**Sample Facilities Master Plan Process Diagram**



Source: The Texas Education Agency.

**Exhibit 6-15** presents a model that is used to convert goals and objectives included in a comprehensive facilities master plan into measurable benchmarks.

**Exhibit 6-15  
Master Plan Goals & Objectives Expressed as Measurable Benchmarks**

Area	Benchmark	Current Measure
<b>Facility Use</b>	Percent of utilization of permanent space – Cluster	%
	Percent utilization of permanent space – High	%
	Percent utilization of permanent space – Middle	%
	Percent utilization of permanent space – Elementary	%
	Percent Schools with utilization less than 85 percent – Cluster	%
	Amount/Percent Underutilized Space Converted to Useable Space	SFT / %
<b>Planning</b>	Portable space as a percentage of classroom space – Cluster	%
	Portable space as a percentage of classroom space – High	%
	Portable space as a percentage of classroom space – Middle	%
	Portable space as a percentage of classroom space – Elementary	%
	Gross Sq. Ft./Student – Cluster	SFT
	Gross Sq. Ft./Student – High	SFT
	Gross Sq. Ft./Student – Middle	SFT
	Gross Sq. Ft./Student – Elementary	SFT
	Deferred Maintenance Backlog – Cluster	\$
	Percent of Schools with Deficient Media Resource Centers & Cafeterias – Cluster (Elementary, Middle, and High School)	\$
<b>Accessibility &amp; Safety</b>	Air Quality Levels	Readings
	Number and percent of Schools with Full Accessibility for Special Needs – Cluster (Elementary, Middle and High Schools)	Number/ %
<b>Delivery &amp; Funding</b>	Design Services Costs as a Percentage of Construction Costs	%
	FF&E (including finance costs, if any) Costs/Student Served	\$
	Program Master Schedule/Duration	Months
	Program Investment Cost/Student	\$
<b>Operations</b>	Facility Planning & Operations Cost/Sq. Ft.	\$
	Facility Planning & Operations Cost/Student	\$
	Energy Cost/Sq. Ft.	\$
	Custodial Operations Cost/Sq. Ft. (Outsourced)	\$
	Project Construction Costs/Student	\$
	Preventive Maintenance Program Budget	\$

Source: McConnell Jones Lanier & Murphy LLP.

**RECOMMENDATION 6-A.1:**

**Complete the planning components necessary to implement a fully-integrated 10-year Facilities Master Plan that addresses systemwide needs.**

The School System should retain the services of a consultant with experience in conducting facilities master plans for similar-sized school districts. The master plan should integrate data already gathered by

the School System, as well as develop strategic initiatives that enhance facilities and improve the learning environment for students.

### **FISCAL IMPACT**

The facilities master plan can be developed at a one-time cost to the School System of \$200,000. The estimate assumes a team of consultants will augment the Facility Planning & Construction Department's input along with the Student Assignment Services Department and the School System's chief financial officer in the development of the plan.

### **OBSERVATION 6-B**

#### **The Facility Planning & Construction Department has not implemented a post-occupancy evaluation tool to conduct assessments of new construction and renovation projects.**

The department is in the process of developing a post-occupancy evaluation tool and anticipate that formal procedures for conducting assessments of new construction and renovation projects would be in place in August 2014, when new and renovated campuses open at the start of the school year. The School System contracts with Heery International, Inc., for construction project management services. According to Facility Planning & Construction Department management, Heery International, Inc., developed post-occupancy reports for other school district construction programs and has provided a template for the School System's use.

Post-occupancy evaluations are a necessary part of ongoing improvements and cost-effective management techniques. Failure to document performance deficiencies identified in the post-construction evaluation; the reasons for their occurrence; and procedures for avoiding the deficiency in the future, can result in continuous oversights and errors recurring in future projects. Potential problems can be greatly reduced by instituting post-occupancy evaluations following buildings' completion and occupancy.

Valuable lessons can be learned from post-occupancy evaluations. Design quality will be improved, and costs can be reduced. Most post-construction evaluations include highly structured and well-documented reviews, providing at a minimum, the answers to the following questions:

- How well the completed building conforms to the educational program?
- Did the educational program produce the desired results?
- Does the facility meet expectations of building code officials and school administrators concerned with security, safety, and risk management?
- Do the HVAC equipment, toilet accessories, and furniture and equipment fit within the guidelines for repair and replacement?
- How well does the facility provide access to persons with special needs?
- Is the facility neighborhood-friendly?
- How well do the materials used in construction meet expected long-term maintenance and repair concerns?

- What impact do construction materials have on custodial operations?
- How do energy operating costs, comfort ventilation, and health and sanitation impact the overall quality of facilities?

#### **RECOMMENDATION 6-B.1**

##### **Develop and implement a process to conduct post-occupancy evaluations of major construction projects.**

The Facility Planning & Construction Department should include the school principal, educational program directors, teachers, maintenance and custodial staff, food service staff, and any selected facilities support staff deemed appropriate in the evaluation.

The data gathered should be incorporated into the School System's facility design standards.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

### **SCHOOL UTILIZATION**

#### **OBSERVATION 6-C**

##### **The School System lacks a comprehensive plan that ensures facility utilization is optimized.**

The overall school cluster utilization rate ranges from 102 percent to 64 percent, resulting in overcrowded and underutilized schools. Plans have been developed to address overcrowding in some, but not all clusters or, in clusters where schools are underutilized. School system management indicated that more aggressive plans to relieve overcrowded and underutilized school conditions are limited because of the lack of control of receiving funding from the Metropolitan Nashville Government.

The School System's Student Assignment Services Department has the responsibility for monitoring enrollment growth and decline, and overall facility utilization. The School System uses its student assignment policies, including the 2008 rezoning plan and School Board Operations 1.105, as well as strategies outlined in the United States Department of Education's Guidance on the Voluntary Use of Race to Achieve Diversity and Avoid Racial Isolation in Elementary and Secondary Schools. A Diversity Management Plan has been developed, and is used to consider any foreseeable impact to student diversity—prior to making recommendations regarding student assignment that will impact utilization rates.

Overcrowding and underutilization of facilities is a challenge that many school systems face—particularly those in urban areas, due to ongoing changes in student demographic trends, housing patterns, and mobility rates.

There are no consistent documented standards for determining ranges for effective school facility utilization by use category. This is important because overcrowded schools negatively impact students'

learning environments and underutilized schools are far more costly to operate on a per student basis. For purposes of this analysis, the review team analyzed existing school facility data such as building square footage, number of portables, three-year enrollment trends, and utilization rates based on October 2013 enrollment, and the two prior school years. From the analysis, the review team established sample use rate categories to assess the School System’s facility utilization effectiveness by cluster and individual school. Definitions for the sample use rate categories include the following:

- Overcrowded – utilization rate of 111 percent or higher;
- Targeted utilization – utilization rate of 80 to 110 percent (ideal use rate 85 to 95 percent);
- Underutilization and candidate for co-location of programs – utilization rate of 55 to 79 percent; and
- Underutilization and candidate for consolidation or closure – utilization rate of 54 percent and below for two consecutive years.

**Exhibit 6-16** shows the utilization rates for each school cluster and the lottery (magnet) schools based on October 2013 enrollment. The exhibit illustrates the dramatic differences in utilization rates among the clusters. The Antioch cluster has the highest utilization rate at 102 percent and the Whites Creek cluster has the lowest utilization rate at 64 percent. The exhibit also illustrates that even with the wide disparity of utilization rates among the clusters, no individual cluster, has schools that are completely overcrowded or severely underutilized.

**Exhibit 6-16  
Metropolitan Nashville Public Schools Facility Cluster Summary and Utilization Rate**

Cluster Name	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Antioch Cluster	24	1,058,695	38,000	1,096,695	50	8,193	8,000	102%
Overton Cluster	42	965,185	58,520	1,023,705	77	7,935	7,978	99%
Hillsboro Cluster	60	846,589	12,160	858,749	16	4,904	5,055	97%
Cane Ridge Cluster	22	872,329	29,640	901,969	39	6,197	6,496	95%
McGavock Cluster	44	1,548,022	13,680	1,561,702	18	9,595	10,216	94%
Lottery Schools	52	1,377,605	3,800	1,381,405	5	8,307	8,879	94%
Hunters Lane Cluster	48	1,001,696	23,560	1,025,256	31	6,782	7,412	92%
Hillwood Cluster	43	704,642	9,880	714,522	13	4,993	5,459	91%
Glencliff Cluster	43	959,169	16,720	975,889	22	5,987	6,628	90%
Pearl-Cohn Cluster	43	805,096	0	805,096	0	3,654	4,336	84%
Maplewood Cluster	40	808,772	760	809,532	1	3,998	5,617	71%
Stratford Cluster	59	840,623	1,520	842,143	2	3,621	5,119	71%
Whites Creek Cluster	33	664,263	760	665,023	1	3,070	4,829	64%
<b>Subtotal Core Schools</b>	<b>43</b>	<b>12,452,686</b>	<b>209,000</b>	<b>12,661,686</b>	<b>275</b>	<b>77,236</b>	<b>86,024</b>	<b>90%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014.

Of the School System’s 12 clusters, eight—Antioch, Overton, Hillsboro, McGavock, Hillwood, Glencliff, Hunters Lane, and Stratford—have a combined total of 14 individual schools with utilization rates of 111 percent or higher. All but two of these schools are scheduled on the School System’s capital budget to receive additions, renovation, or replacement. Five of these projects are scheduled in 2014-2015; one project is scheduled in 2015-2016; three projects are scheduled in 2016-2017; and two projects are scheduled in 2017-2018.

As noted earlier, the Antioch cluster has the highest utilization rate in the School System at 102 percent. Within the Antioch cluster, Lakeview Design Center and Thomas A. Edison Elementary have utilization rates at 135 percent and 113 percent, respectively. J.E. Moss Elementary School is approaching overcrowded status with a utilization rate of 110 percent. All of the remaining schools in the Antioch cluster have a utilization rate in the targeted range of 80 percent to 110 percent. Additionally, the Antioch cluster is operating with 50 portables, the second highest number of portables within the 12 clusters. Portables are used to provide additional classroom and administrative space. The high number of portables further accentuates the overcrowded conditions in the Antioch cluster (**Exhibit 6-17**).

**Exhibit 6-17  
Antioch Facility Cluster Summary and Utilization Rate**

Antioch Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Lakeview Design Center	47	83,429	12,920	96,349	17	929	689	135%
Thomas A. Edison Elementary School	10	70,775	4,560	75,335	6	689	608	113%
J E Moss Elementary School	26	101,313	3,800	105,113	5	910	827	110%
Una Elementary School	27	93,703	9,880	103,583	13	899	850	106%
J. F. Kennedy Middle School	13	114,620	0	114,620	0	839	834	101%
Antioch Comprehensive High School	17	287,393	6,840	294,233	9	1,971	1,982	99%
Mt. View Elementary	15	86,180	0	86,180	0	670	732	92%
Apollo Middle School	47	142,702	0	142,702	0	812	918	88%
Margaret Allen Middle School	12	78,580	0	78,580	0	474	560	85%
<b>Cluster Total/Average</b>	<b>24</b>	<b>1,058,695</b>	<b>38,000</b>	<b>1,096,695</b>	<b>50</b>	<b>8,193</b>	<b>8,000</b>	<b>102%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014. Note: A new elementary school with capacity for 800 students will open in 2015-2016 to relieve overcrowding at Lakeview Design Center and Thomas A. Edison Elementary School.

The Overton cluster has a utilization rate of 99 percent, the second highest in the School System. Within this cluster, both Tusculum Elementary School—with a utilization rate of 120 percent, and Crieve Hall Elementary School, with a utilization rate of 113 percent, would be considered overcrowded under the review team’s sample utilization categories. Haywood Elementary School is approaching overcrowded status with a utilization rate of 109 percent.

All 10 schools in the Overton cluster are operating at a targeted utilization rate of 80 percent or higher; however, it is important to note that the Overton cluster operates with the highest number of portables at 77—which are used for classroom and administrative use, accentuating the overcrowded conditions at some of its schools (**Exhibit 6-18**).

**Exhibit 6-18  
Overton Facility Cluster Summary and Utilization Rate**

Overton Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Tusculum Elementary School	62	60,554	7,600	68,154	10	640	534	120%
Crieve Hall Elementary School	60	57,418	1,520	58,938	2	401	356	113%
Haywood Elementary School	55	87,009	9,880	96,889	13	874	803	109%
John Overton Comprehensive High School	56	248,441	3,800	252,241	5	1,795	1,703	105%
Norman Binkley Elementary School	54	44,923	15,200	60,123	20	780	789	99%
Croft Middle Design Center	11	110,000	0	110,000	0	736	761	97%
McMurray Middle School	50	123,150	0	123,150	0	729	788	93%
Granbery Elementary School	50	73,573	7,600	81,173	10	726	794	91%
William Henry Oliver Middle School	10	89,392	5,320	94,712	7	787	900	87%
Shayne Elementary School	10	70,725	7,600	78,325	10	467	550	85%
<b>Cluster Total/Average</b>	<b>42</b>	<b>965,185</b>	<b>58,520</b>	<b>1,023,705</b>	<b>77</b>	<b>7,935</b>	<b>7,978</b>	<b>99%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014.

**Exhibit 6-19** shows the Hillsboro cluster with a 97 percent utilization rate overall. In the Hillsboro cluster, Julia Green Elementary and Percy Priest Elementary Schools have the highest utilization rates in the cluster, 117 percent and 112 percent, respectively. All schools in the cluster are at the review team's targeted utilization rate of 80 percent or higher.

**Exhibit 6-19  
Hillsboro Facility Cluster Summary and Utilization Rate**

Hillsboro Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Julia Green Elementary School	66	67,005	5,320	72,325	7	580	495	117%
Percy Priest Elementary School	58	59,418	2,280	61,698	3	555	494	112%
Eakin Elementary School	86	103,730	0	103,730	0	578	575	101%
J T Moore Middle School	45	109,083	760	109,843	1	646	661	98%
West End Middle School	75	99,514	1,520	101,034	2	472	505	93%
Carter-Lawrence Magnet Elementary School	10	65,458	0	65,458	0	390	434	90%
Sylvan Park Paideia Design Center	79	69,221	760	69,981	1	474	532	89%
Hillsboro Comprehensive High School	59	273,160	1,520	274,680	2	1,209	1,359	89%
<b>Cluster Total/Average</b>	<b>60</b>	<b>846,589</b>	<b>12,160</b>	<b>858,749</b>	<b>16</b>	<b>4,904</b>	<b>5,055</b>	<b>97%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014. Note: Waverly Belmont Elementary School will open in 2015-2016 to relieve overcrowding at Julia Green Elementary School and Percy Priest Elementary School.

**Exhibit 6-20** shows that the Cane Ridge cluster has a 95 percent utilization rate. All schools in the cluster are at the review team's targeted utilization rate of 80 percent or higher.

**Exhibit 6-20**
**Cane Ridge Facility Cluster Summary and Utilization Rate**

Cane Ridge Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Cane Ridge Elementary School	2	90,684	3,040	93,724	4	902	830	109%
Cole Elementary School	52	83,830	1,520	85,350	2	816	789	103%
Cane Ridge Comprehensive High School	6	310,000	0	310,000	0	1,669	1,669	100%
Marshall Middle School	8	113,519	0	113,519	0	810	890	91%
Antioch Middle School	65	132,476	10,640	143,116	14	693	780	89%
A.Z. Kelley Elementary School	8	77,480	3,800	81,280	5	723	825	88%
Henry Maxwell Elementary School	13	64,340	10,640	74,980	14	584	713	82%
<b>Cluster Total/Average</b>	<b>22</b>	<b>872,329</b>	<b>29,640</b>	<b>901,969</b>	<b>39</b>	<b>6,197</b>	<b>6,496</b>	<b>95%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014.

**Exhibit 6-21** shows that the McGavock cluster maintains a utilization rate of 94 percent. Ruby Major Elementary, Dupont Tyler Middle, and Pennington Elementary schools are all overcrowded, based on the review team's sample target utilization of 111 percent or higher. The remaining schools in the cluster are in the targeted utilization range of 80 percent to 110 percent, with the exception of Tulip Grove Elementary School, which has a utilization rate of 74 percent.

**Exhibit 6-21**
**McGavock Facility Cluster Summary and Utilization Rate**

McGavock Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Ruby Major Elementary	9	68,600	2,280	70,880	3	649	575	113%
Dupont Tyler Middle School	45	123,903	760	124,663	1	658	591	111%
Pennington Elementary School	55	42,488	3,800	46,288	5	366	330	111%
McGavock Elementary School	59	42,030	3,040	45,070	4	311	294	106%
Hickman Elementary School	14	71,466	2,280	73,746	3	552	532	104%
Dodson Elementary School	46	65,634	1,520	67,154	2	545	551	99%
Dupont Hadley Middle School	75	106,348	0	106,348	0	638	661	97%
Dupont Elementary School	63	60,372	0	60,372	0	461	489	94%
Napier Enhanced Option School	14	75,145	0	75,145	0	458	499	92%
Andrew Jackson Elementary School	45	74,290	0	74,290	0	535	584	92%
McGavock Comprehensive High School	43	456,100	0	456,100	0	2299	2531	91%
Donelson Middle School	61	112,489	0	112,489	0	674	761	89%
Two Rivers Middle School	54	113,651	0	113,651	0	597	702	85%
Hermitage Elementary School	52	53,954	0	53,954	0	298	370	81%
Tulip Grove Elementary School	25	81,552	0	81,552	0	554	746	74%
<b>Cluster Total/Average</b>	<b>44</b>	<b>1,548,022</b>	<b>13,680</b>	<b>1,561,702</b>	<b>18</b>	<b>9,595</b>	<b>10,216</b>	<b>94%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014.

**Exhibit 6-22** shows that the utilization rate for lottery (magnet) schools is 94 percent. All of the schools within this cluster fall within the review team's sample target utilization of 80 percent or higher, with the exception of Haynes Middle Health/Medical Science Design Center, which has a utilization rate of 38 percent.

**Exhibit 6-22  
Lottery Schools Facility Cluster Summary and Utilization Rate**

Lottery Schools Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Head Magnet Middle School	62	65,873	0	65,873	0	597	547	109%
Meigs Magnet Middle School	10	84,885	1,520	86,405	2	693	666	104%
Hume-Fogg Magnet High School	102	207,322	0	207,322	0	922	892	103%
Martin Luther King, Jr. Magnet at Pearl High School	78	141,034	0	141,034	0	1,195	1,162	103%
Glendale Elementary School	61	54,746	760	55,506	1	423	413	102%
Stanford Montessori Elementary School	12	54,470	0	54,470	0	420	413	102%
Lockeland Design Center	75	40,183	760	40,943	1	294	299	98%
East Nashville Magnet School	82	208,308	0	208,308	0	1,196	1,216	98%
Hull-Jackson Montessori Magnet Elementary School	17	78,100	0	78,100	0	477	489	98%
Jones Paideia Magnet School	78	64,560	0	64,560	0	374	418	89%
Rose Park Middle Math/Science Magnet	60	45,962	0	45,962	0	407	459	89%
Nashville School of the Arts Magnet High School	31	140,665	0	140,665	0	640	772	83%
I.T. Creswell Arts Middle Magnet School	53	110,405	0	110,405	0	459	573	80%
Haynes Middle Health/Medical Science Design Center	11	81,092	760	81,852	1	210	560	38%
<b>Cluster Total/Average</b>	<b>52</b>	<b>1,377,605</b>	<b>3,800</b>	<b>1,381,405</b>	<b>5</b>	<b>8,307</b>	<b>8,879</b>	<b>94%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014.

**Exhibit 6-23** shows the Hillwood cluster has a utilization rate of 91 percent. Hillwood Comprehensive High School has the lowest utilization rate, at 69 percent, of all schools in the cluster, and is considered to be underutilized based on the review team's sample use categories. Bellevue Middle School is categorized as overcrowded, and Westmeade Elementary School is approaching overcrowded status with utilization rates of 114 percent and 110 percent, respectively. All remaining schools are in the target range for utilization.

**Exhibit 6-23  
Hillwood Facility Cluster Summary and Utilization Rate**

Hillwood Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Bellevue Middle School	44	99,107	3,800	102,907	5	731	643	114%
Westmeade Elementary School	54	53,457	4,560	58,017	6	503	456	110%
H G Hill Middle School	44	85,645	760	86,405	1	623	591	105%
Harpeth Valley Elementary School	18	97,254	0	97,254	0	775	774	100%
Charlotte Park Elementary School	54	65,040	760	65,800	1	497	527	94%
Gower Elementary School	25	80,033	0	80,033	0	664	741	90%
Hillwood Comprehensive High School	61	224,106	0	224,106	0	1,200	1,727	69%
<b>Cluster Total/Average</b>	<b>43</b>	<b>704,642</b>	<b>9,880</b>	<b>714,522</b>	<b>13</b>	<b>4,993</b>	<b>5,459</b>	<b>91%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014. Note: Cameron Middle School only operated grade 8.

**Exhibit 6-24** shows that the Glencliff cluster has an overall utilization rate of 90 percent. The Glencliff cluster has two overcrowded campuses: Paragon Mills Elementary School and Glenview Elementary School, with utilization rates at 124 percent and 117 percent, respectively. Cameron Middle School has the lowest utilization rate at 15 percent and is being converted to Cameron College Prep Middle School. All other schools in the Glencliff cluster operate at the targeted utilization rate of 80 percent or higher.

**Exhibit 6-24  
Glenciff Facility Cluster Summary and Utilization Rate**

Glenciff Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Paragon Mills Elementary School	49	76,497	10,640	87,137	14	905	730	124%
Glenview Elementary School	8	89,180	3,040	92,220	4	830	711	117%
Fall-Hamilton Enhanced Option School	44	64,471	760	65,231	1	317	299	106%
Glenciff Elementary School	39	66,621	0	66,621	0	527	513	103%
John B Whitsitt Elementary School	14	67,300	0	67,300	0	544	551	99%
Glengarry Elementary School	52	65,436	0	65,436	0	474	508	93%
Glenciff Comprehensive High School	58	277,600	760	278,360	1	1,414	1,550	91%
Wright Middle School	49	126,395	1,520	127,915	2	856	963	89%
Cameron Middle School	75	125,669	0	125,669	0	120	803	15%
<b>Cluster Total/Average</b>	<b>43</b>	<b>959,169</b>	<b>16,720</b>	<b>975,889</b>	<b>22</b>	<b>5,987</b>	<b>6,628</b>	<b>90%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014.

**Exhibit 6-25** shows that the Hunters Lane cluster operates at a utilization rate of 92 percent. Gateway Elementary School is overcrowded, based on the review team's sample target utilization of 111 percent or higher. In contrast, there are two schools that would be categorized as underutilized when using the review team's sample target rate of 80 to 110 percent. These schools are Hunters Lane Comprehensive High and Neelys Bend Middle with utilization rates of 78 percent and 73 percent respectively. A new facility is under construction to replace the existing Goodlettsville Middle School.

**Exhibit 6-25  
Hunters Lane Facility Cluster Summary and Utilization Rate**

Hunters Lane Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Gateway Elementary School	50	45,900	0	45,900	0	242	219	111%
Old Center Elementary School	54	50,554	1,520	52,074	2	367	333	110%
Neelys Bend Elementary School	61	56,656	3,040	59,696	4	456	420	109%
Bellshire Design Center	52	58,164	0	58,164	0	527	504	105%
Goodlettsville Middle School	77	89,487	1,520	91,007	2	538	517	104%
Goodlettsville Elementary School	60	57,688	2,280	59,968	3	440	423	104%
Taylor Stratton Elementary School	18	76,355	3,040	79,395	4	664	651	102%
Amqui Elementary School	14	79,708	2,280	81,988	3	641	646	99%
Madison Middle School	63	106,610	9,880	116,490	13	751	891	84%
Hunters Lane Comprehensive High School	28	272,812	0	272,812	0	1,610	2,056	78%
Neelys Bend Middle School	51	107,762	0	107,762	0	546	752	73%
<b>Cluster Total/Average</b>	<b>48</b>	<b>1,001,696</b>	<b>23,560</b>	<b>1,025,256</b>	<b>31</b>	<b>6,782</b>	<b>7,412</b>	<b>92%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014.

**Exhibit 6-26** shows that the Pearl-Cohn cluster has an overall utilization rate of 84 percent. Two schools in the cluster: Park Avenue Enhanced Option School, and McKissack Middle School, have utilization below the review team's sample target utilization rate of 80 percent.

**Exhibit 6-26  
Pearl-Cohn Facility Cluster Summary and Utilization Rate**

Pearl-Cohn Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
John Early Museum Magnet Middle School	12	91,989	0	91,989	0	515	503	<b>102%</b>
Cockrill Elementary School	18	76,300	0	76,300	0	496	513	<b>97%</b>
Churchwell Elementary	56	111,768	0	111,768	0	532	594	<b>90%</b>
Buena Vista Enhanced Option School	83	65,470	0	65,470	0	358	418	<b>86%</b>
Pearl-Cohn Comprehensive Magnet High School	28	241,569	0	241,569	0	858	1,006	<b>85%</b>
Park Avenue Enhanced Option School	15	103,000	0	103,000	0	517	708	<b>73%</b>
McKissack Middle School	60	115,000	0	115,000	0	378	594	<b>64%</b>
<b>Cluster Total/Average</b>	<b>39</b>	<b>805,096</b>	<b>0</b>	<b>805,096</b>	<b>0</b>	<b>3,654</b>	<b>4,336</b>	<b>84%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014.

**Exhibit 6-27** shows that the Maplewood cluster has an overall utilization rate of 71 percent. Shwab Elementary School, Hattie Cotton Elementary School, and Tom Joy Elementary School all have utilization rates that fall within the sample target utilization range of 80 percent to 110 percent. The remainder of the schools in the cluster, including Maplewood Comprehensive High School, have use rates in the underutilized range. Using the review team's utilization standards, Gra-Mar Middle School has the lowest utilization rate in the cluster at 48 percent. Gra-Mar Middle School is a candidate for consolidation or closure since its utilization rate has been below 55 percent for two consecutive years.

**Exhibit 6-27  
Maplewood Facility Cluster Summary and Utilization Rate**

Maplewood Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Shwab Elementary School	25	68,000	0	68,000	0	368	385	96%
Hattie Cotton Elementary School	18	67,000	760	67,760	1	450	475	95%
Tom Joy Elementary School	25	84,532	0	84,532	0	551	632	87%
Chadwell Elementary School	58	57,641	0	57,641	0	337	432	78%
Caldwell Enhanced Option School	77	62,211	0	62,211	0	278	378	74%
Glenn Elementary Enhanced Option School	25	54,760	0	54,760	0	177	252	70%
Maplewood Comprehensive High School	58	224,749	0	224,749	0	973	1,449	67%
Jere Baxter Middle School	17	90,120	0	90,120	0	433	719	60%
Gra-Mar Middle School	53	99,759	0	99,759	0	431	895	48%
<b>Cluster Total/Average</b>	<b>40</b>	<b>808,772</b>	<b>760</b>	<b>809,532</b>	<b>1</b>	<b>3,998</b>	<b>5,617</b>	<b>71%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014.

**Exhibit 6-28** shows that the Stratford Cluster has an overall utilization rate of 71 percent. The Kirkpatrick Enhanced Option School has the highest utilization rate at 128 percent, indicating overcrowding. Based on the review team’s sample utilization target of 80 percent or higher, Dan Mills Elementary and Warner Enhanced Option School fall within the range. All other schools in the cluster fall in the range for underutilized schools.

**Exhibit 6-28  
Stratford Facility Cluster Summary and Utilization Rate**

Stratford Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Kirkpatrick Enhanced Option School	62	64,495	760	65,255	1	383	299	128%
Dan Mills Elementary School	14	73,807	0	73,807	0	559	570	98%
Warner Enhanced Option School	95	87,259	0	87,259	0	342	428	80%
Ross Elementary School	26	53,298	0	53,298	0	236	333	71%
Inglewood Elementary School	56	66,962	0	66,962	0	310	489	63%
Bailey Middle School	85	97,000	0	97,000	0	439	707	62%
Stratford Comprehensive High School	53	234,258	760	235,018	1	717	1,200	60%
Rosebank Elementary School	60	60,583	0	60,583	0	296	508	58%
Isaac Litton Middle School	76	102,961	0	102,961	0	339	585	58%
<b>Cluster Total/Average</b>	<b>59</b>	<b>840,623</b>	<b>1,520</b>	<b>842,143</b>	<b>2</b>	<b>3,621</b>	<b>5,119</b>	<b>71%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014.

**Exhibit 6-29** shows that the Whites Creek cluster has an overall utilization rate of 64 percent. Only Alex Green Elementary School and Bordeaux Enhanced Option School operate at utilization rates that fall within the sample target utilization range of 80 percent to 110 percent. Whites Creek Comprehensive High School operates at a utilization rate of only 62 percent.

**Exhibit 6-29  
Whites Creek Facility Cluster Summary and Utilization Rate**

Whites Creek Cluster	Age/ Average	Permanent Square Feet	Square Feet of Portables	Gross Square Feet	Number of Portables	Enrollment October 2013	Capacity	Percent Utilization Rate
Alex Green Elementary School	27	59,716	760	60,476	1	372	370	101%
Bordeaux Enhanced Option School	59	63,744	0	63,744	0	372	375	99%
Cumberland Elementary School	16	68,430	0	68,430	0	403	513	79%
Joelton Elementary School	25	62,600	0	62,600	0	305	428	71%
Robert E. Lillard Elementary	53	62,982	0	62,982	0	342	527	65%
Whites Creek Comprehensive High School	36	256,961	0	256,961	0	826	1,337	62%
Joelton Middle School (Temporarily located in Haynes Middle Health/Medical Science Design Center)	N/A	N/A	N/A	N/A	N/A	277	456	61%
Brick Church Middle School	13	89,830	0	89,830	0	173	823	21%
<b>Cluster Total/Average</b>	<b>33</b>	<b>664,263</b>	<b>760</b>	<b>665,023</b>	<b>1</b>	<b>3,070</b>	<b>4,829</b>	<b>64%</b>

Source: Metropolitan Nashville Public Schools, Student Assignment Services and Facility Planning & Construction Departments, December 2014. Note: Brick Church Middle School operated only grades 7 and 8 and is being converted to Brick Church College Prep Middle School.

**RECOMMENDATION 6-C.1****Optimize school facility utilization in all clusters as a component of the facility master planning process.**

The School System should develop a rolling three-year plan that is designed to optimize facility use. The plan should focus on opportunities for alleviating overcrowded and underutilized schools by redrawing both cluster and school zone boundaries. Identification and delivery of the most attractive instructional programs in the most cost-effective manner possible should also be a key component of the plan. To accomplish this goal, the School System will need to perform the following activities:

- Develop and implement a transparent, proactive community engagement process.
  - communicate changes in student enrollment trends to parents and stakeholders so that they are aware of the impact of overcrowding and underutilization of schools on an ongoing basis.
  - identify parent and stakeholder preferences and involve them in the decision-making process as to which schools may be impacted when changes are made.
- Redraw cluster and school zone boundaries, and develop strategies to balance enrollment and alleviate underutilized and overcrowded schools.
  - explore consolidating cluster boundaries and rezoning students in cases where the high school and some middle and elementary schools are underutilized in the same cluster (e.g., Maplewood, Stratford, and Whites Creek clusters). Identify ways to consistently invigorate enrollment at the elementary and middle schools that feed to these high schools; otherwise enrollment at the high school and within the feeder pattern may decline further over time. School utilization varies widely in the Hunters Lane and Pearl-Cohn clusters. The Hunters Lane cluster has three schools that are either overcrowded or approaching overcrowded status. There are also two schools in the cluster that are underutilized. The Stratford cluster has one school, Kirkpatrick Enhanced Option School, which is operating at a 128 percent utilization rate, while three other elementary schools are underutilized.
  - the School System should continue to use its Diversity Management Plan to ensure appropriate ethnic diversity, demographics, and economic ratios when redrawing attendance cluster or school zone boundaries to maintain the most diverse student population possible within each cluster and within each school zone.
  - identify opportunities for co-location and shared occupancy by two or more schools (e.g., a charter school co-locates with an underutilized school or two schools with low utilization, but different, innovative academic program offerings combine).
  - consolidate schools with low utilization rates and that are expensive to operate (schools that have fewer than 54 percent utilization for two consecutive years) so that funding can be diverted to more viable academic programming.

- Explore opportunities to expand permanent classroom space at overcrowded schools in the Overton, Hillwood, and McGavock clusters in addition to the new elementary schools that are planned for the Antioch and Hillsboro clusters.
  - explore the feasibility of renovating and expanding permanent classroom wings in overcrowded schools and reduce reliance on portables. The Overton cluster is using 77 portables, and the Antioch cluster is using 50 portables—both for classroom and administrative use. Portables are often more expensive to operate and maintain than permanent structures, on a square footage basis.
  - encourage collaboration with providers, as charter schools continue to expand, to target locations that will assist with relieving overcrowding, perhaps in the Antioch, Hillsboro, Overton, Hillwood, and McGavock clusters.
- Enhance academic programming at neighborhood schools.
  - identify additional academic and extracurricular programs to promote interest in school facilities and increase the number of lottery/themed magnet schools. All of the lottery schools, with the exception of the Haynes Middle Health/Medical Science Design Center, have utilization rates at 80 percent and above. Aggressively market the Haynes Middle Health/Medical Science Design Center to increase utilization at that school. If the utilization does not improve within the next two years, then explore a different magnet theme for the school, or elimination of the program, so that those funds can be used to support a more viable program.
  - continue to identify schools with low utilization rates that are also low-performing and low poverty. Redirect students from these schools to schools with higher student performance and higher family income levels (See **Observation 3-B** in the Charter School Chapter).
- Compile and maintain comparative operational and administrative cost data related to overcrowded and underutilized schools to better inform the decision-making process. For example, administrative, operational, and utility costs are proportionately higher for smaller and underutilized schools, when compared to schools that are functioning at full capacity or higher.

## FISCAL IMPACT

The School System can implement this recommendation with existing resources.

## **MAINTENANCE MANAGEMENT**

### OBSERVATION 6-D

**The Facility & Grounds Maintenance Department does not use a staff allocation model to determine the appropriate level of manpower required to execute maintenance operations.**

The Facility & Grounds Maintenance Department determines its staffing requirements for maintenance activities based on the backlog of work orders in the system and special projects typically requested by school administrators and central administrators. The review team saw no evidence of a staff allocation model that uses a systematic approach to determine maintenance staff; and this practice contributes to an ineffective distribution of workloads, low productivity, and potential overstaffing within the department. **Exhibit 6-30** compares staffing in the Facility & Grounds Maintenance Department to peer school systems selected by the School System in collaboration with the review team.

**Exhibit 6-30  
Facility & Grounds Maintenance Staffing Comparison  
Metropolitan Nashville Public Schools and Peers**

Variable	Metropolitan Nashville Public Schools	Duval County Public Schools (Jacksonville, FL)	Polk County Schools (Lakeland-Winter Haven, FL)	Shelby County Public Schools (Memphis, TN)
2013-2014 Fall Enrollment	82,863	124,686	97,902	149,234
Total Number of Schools (excluding charters (MNPS: Core/Lottery-129, Alternative Learning-4, Special Ed-3, Special-3)	139 (Excluding Charter Schools)	158 (Excluding Charter Schools)	147	233 (Excluding Charter Schools)
Maintenance/Grounds/Custodial Management, Supervision and Foreman	14	28		39
Supervisor and Project Manager	2			
Administrative and Clerical	3		6	9
Roof Asset	3			
General Maintenance – Masonry, Fencing, Maintenance	10			18
General Maintenance-Roofing	4			
Painters/Glass	26	38		13
Carpenters and Helpers	27	18		32
Plumbers	16	18		30
HVAC Technicians	28	45		36
Energy Management (MNPS-HVAC Technicians)	2	3		4
Locksmith (MNPS-Carpentry)	10	11		5
Electricians	16	24		40
Electronics	16			
Mechanics				5
Environmental	2			
Sign Shop	1			
Warehouse	1			
Other – All Trades (Polk) (A)			230	
<b>Total Maintenance Positions Excluding Grounds and Facility Planning and Construction Positions (B)</b>	<b>181(C)</b>	<b>185</b>	<b>236</b>	<b>231</b>
<b>Maintenance Positions per School</b>	<b>1.30</b>	<b>1.17</b>	<b>1.61</b>	<b>0.99</b>
<b>Peer Average (without Metropolitan Nashville Public Schools)</b>	<b>1.21</b>			
<b>Metropolitan Nashville Public Schools Over (Under) Peer Average</b>	<b>.09</b>			
<b>Percent Over (Under) Peer Average</b>	<b>7%</b>			

Source: Metropolitan Nashville Public Schools, Facility & Grounds Maintenance Department and Peer Survey, July 2014.

Note (A): Polk County Schools provided total maintenance positions for all trades in one line item.

Note (B): Analysis used only maintenance positions to normalize data for peer comparisons. The School System outsources grounds maintenance services and the Facility Planning & Construction Department does not perform maintenance functions.

Note (C): The 181 positions noted equates to the 199 positions shown on the Facility & Grounds Maintenance organization chart less 18 positions assigned to general services that performs work on the School Systems athletic grounds.

Comparing maintenance staffing standards among school districts is inherently difficult, uncertain, and complex. Maintenance staffing levels often are based on the amount of space and facilities workers must maintain. Many variables come into play. For example, school district size, age of facilities, extent of outsourcing, geographical dispersion of facilities, amount of green space that must be maintained, and a host of other variables. As a result, comparisons will not be definitive; however, comparisons could be a starting point for evaluating a school district's own staffing and structure.

The comparison in **Exhibit 6-30** is instructive in the sense that it provides a context for discussion about developing an in-house maintenance staff model. **Exhibit 6-30** shows the School System has 1.3 full time equivalent maintenance positions per school, which is 7 percent higher than the peer average for full time equivalent maintenance positions per school. While this difference might be wholly justified given the differences between school districts, developing a staffing model is also justified. The Florida Department of Education has developed a maintenance and operations administrative guidelines for school districts in the state. The manual can be found at the following link:

<http://www.fldoe.org/finance/edual-facilities/maintenance-operations-administrative-stml>

The purpose of the manual is “to provide an update of acceptable and effective maintenance and operations management practices and current standards for educational facilities. It is also intended to provide a comprehensive framework for delivering beneficial and cost-effective services at each school”

The manual acknowledges the complexity inherent in organizing maintenance operations.

“In developing new organizational plans for maintenance and operations departments or modifying existing ones, administrators should be aware of the myriad circumstances that must be taken into consideration. While the ultimate objective is to create the “best” organizational structure that is required to maintain a particular educational facility, administrators should not be overly concerned with creating an “ideal” structure that fits all needs. Given the dynamics of maintenance and operations functions and the rate of change occurring in physical plants, it is likely that any organizational plan that is proven to be effective today may have to be modified within a year's time to reflect added responsibilities, new priorities, and changes in work procedures. Based on these circumstances, one criterion that is essential for defining the organizational structure of a maintenance and operations department is the ability to accurately define the overall scope of work required to adequately maintain a facility.”

It is important to note that benchmark data related to industry standards is strictly quantitative and does not reflect differences in quality or service levels. Benchmark data provides a starting point and uniform unit of measure to compare similar operations and function. The School System should primarily use this data to look for opportunities to “right-size staffing, improve productivity levels of maintenance staff, and improve the department's operational performance.

#### **RECOMMENDATION 6-D.1**

**Develop an allocation model to determine the appropriate staffing levels for the Facility & Grounds Maintenance Department to enhance productivity levels in the most efficient, cost-effective manner.**

The director of the Facility & Grounds Maintenance Department should analyze the current staffing levels, disparate work activities, and productivity per full time equivalent maintenance position and develop an allocation model to determine the most cost-effective method to allocate staff to maintenance activities. The director of Facility & Grounds Maintenance can develop the allocation model using a variety of criteria such as work activity or square footage of schools and administrative facilities per maintenance full time equivalent; maintenance full time equivalents per number of schools and administrative facilities maintained; and maintenance full time equivalent per student. Once the director develops the model and applies it to the School System's maintenance function, the top priority must be to reduce excessive staffing levels and thereby reduce administrative costs.

### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

### **OBSERVATION 6-E**

**The Facility & Grounds Maintenance Department currently uses a geographic zone approach to deploy staff for only four out of nine of its trade areas when performing routine, preventative, and emergency maintenance. This approach is often found to be more productive and cost-effective, especially in large school districts.**

The School System uses a geographic zone maintenance approach for its heating, ventilation, and air conditioning (HVAC), electrical, plumbing, and glass trades. The trade areas that cover painting, carpentry, general maintenance, electronics, and general services have not been using a geographic zone approach.

Best practice management methods for many large school districts use a geographic zone approach to deploy maintenance staff where multi-functional trades such as paint, carpentry, general maintenance, general services, electrical, plumbing, and HVAC are replicated in each organizational unit. This management practice is particularly appropriate for a city like Nashville, where the geographic boundaries of the School System are approximately 533 square miles. Another best practice under a geographic zone approach is to create a regular schedule for each school or administrative building to have all of its maintenance needs addressed (both routine and preventative) during each visit.

As part of our evaluation process, the review team toured 32 schools during the onsite visit and found all to be in generally good condition; however, at least one or more maintenance issues were identified at every school toured—which, when addressed could improve the visual aesthetics and enhance the safety of the learning environment.

**Exhibit 6-31** provides photographic examples of maintenance issues that were identified during the school tours.

**Exhibit 6-31**

**Sample Photos of Routine Maintenance Needs at Metropolitan Nashville Public Schools  
Identified During School Tours**

**PHOTO #1: Cohn High School**  
*Peeling paint on restroom stall*



**PHOTO #2: Antioch High School**  
*Cracked brick on exterior wall*



**PHOTO #3: Glenview Elementary School**  
*Damaged exterior building side roof surface*



**PHOTO #4: Maplewood High School**  
*Floor tile damage*



**Exhibit 6-31**
**Sample Photos of Routine Maintenance Needs at Metropolitan Nashville Public Schools Identified During School Tours (Cont'd)**
**PHOTO #5: Cole Elementary School**  
*Duct disconnected from unit*

**PHOTO #6: Wright Middle School**  
*Missing exit sign*


Source: McConnell Jones Lanier & Murphy LLP photographs from onsite visit school tours, February and March 2014.

Results from the employee opinion survey administered by the review team support these observations. **Exhibit 6-32** shows that 84.4 percent of central administrators and 70.5 percent of teachers, respectively, agree or strongly agree that the School System's emergency responses for maintenance are handled promptly. Response rates from principals and assistant principals were even higher, at 88.5 percent, for the same question. In contrast, however, when asked about whether or not the buildings were maintained in a timely manner, only 62.5 percent of central administrators strongly agreed or agreed that this was being done. A significant percentage of support staff and teachers disagree or strongly disagree with the same question as central administrators.

**Exhibit 6-32**
**Facility & Grounds Maintenance Survey Results**

Question		Percentage Responses			
	Number of Survey Responses	Agree/ Strongly Agree or Somewhat Agree	Disagree or Strongly Disagree	N/A	Total
<b>Emergency maintenance is handled promptly</b>					
<b>Survey Group</b>					
Central Administrators	62	84.4%	6.3%	9.3%	100.0%
Principals/Assistant Principals	104	88.5%	11.5%	0.0%	100.0%
Support Staff	438	81.3%	11.6%	7.1%	100.0%
Teachers	1,208	70.5%	23.8%	5.7%	100.0%
<b>Buildings are properly maintained in a timely manner.</b>					
<b>Survey Group</b>					
Central Administrators	62	62.5%	29.7%	7.8%	100.0%
Principals/Assistant Principals	104	78.9%	21.1%	0.0%	100.0%
Support Staff	438	59.4%	37.2%	3.4%	100.0%
Teachers	1,208	50.3%	47.7%	2.0%	100.0%

Source: McConnell Jones Lanier & Murphy LLP Surveys of Central Administrators, Principals/Assistant Principals, Support Staff, and Teachers, May 2014.

During the onsite visit, the review team was told by the HVAC trade unit that it has devised a system for personnel assigned to share trucks and equipment and it has established short-term goals to maximize productivity, which include the following:

- provide a 24 hour response time for all work requests submitted via SchoolDude work order system;
- provide an immediate response time to all emergencies;
- provide a three-month schedule for replacement of HVAC filters at each site;
- train and educate every technician to allow them to be masters in HVAC;
- document and catalog all HVAC equipment systemwide; and
- implement Environmental Protection Agency and Occupational Safety & Health Administration safety practices.

Some of the main advantages to implementing a geographic zone approach for all trade areas are noted below:

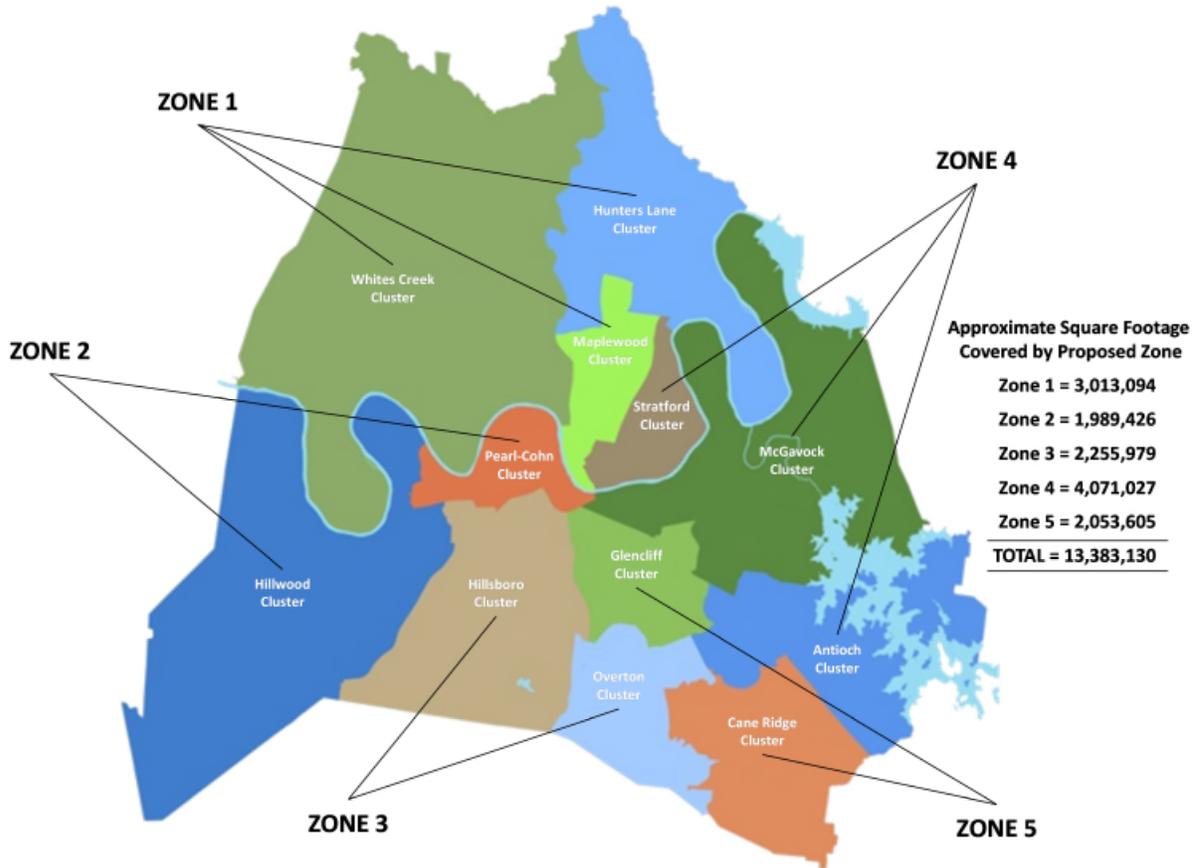
- trade staff is deployed to a more concentrated area within the School System's geographic boundaries, which drastically reduces travel time and fuel usage;
- trade staff productivity is increased because a higher number of work orders can be responded to and non-productive time is decreased because work orders are allowed to accumulate and be addressed with fewer overall trips to the school or building site;
- the overall number of maintenance vehicles needed is reduced and the life-cycle of vehicles increases; and
- faster response to routine and emergency work order requests is achieved and trade staff can better stay on task for handling preventative maintenance needs.

#### **RECOMMENDATION 6-E.1**

**Expand the geographic zone approach for deployment of trade staff for routine, preventative, and emergency maintenance needs.**

**Exhibit 6-33** provides an illustration of the five geographic zones proposed, which represent a combination of several existing high school clusters. The number of multi-functional trade staff assigned to each geographic zone should be determined based on the building square footage assigned to the zone and historical maintenance needs of the buildings.

**Exhibit 6-33**  
**Proposed Geographic Zone Model for Facility & Grounds Maintenance Department Trades**

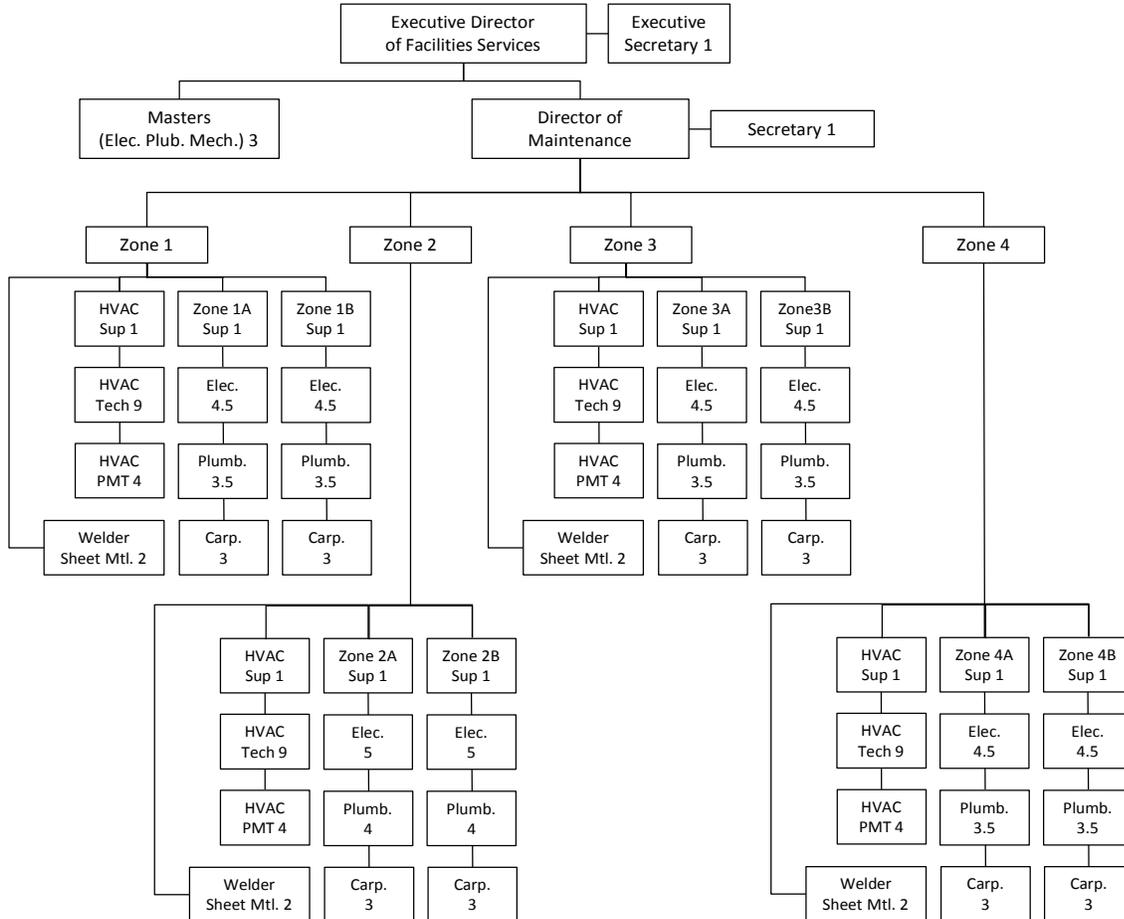


Source: McConnell Jones Lanier & Murphy LLP Review Team.

A maintenance schedule should be developed for each school campus and administrative building using historical maintenance data from the SchoolDude Maintenance Direct work order system to determine the estimated number of days that should be spent at each building to complete routine and preventative work orders. Each school or administrative building should be scheduled for routine and preventative maintenance at least every two to three months. Prior to the scheduled maintenance visit, all work orders should be compiled so that required supplies and materials are readily available. Once all work orders have been completed for that maintenance visit, quality control inspections should be performed by the trade crew supervisor or trade foreman, and the school principal or building administrator, to ensure all work meets the expected standard. The trade crews should also have time planned each day to respond to emergency work orders as needed. After six months of implementing the geographical zone structure, the need for separate preventative maintenance crews should be assessed.

**Exhibit 6-34** provides a sample facility services organization structure for Shelby County Public Schools (Memphis, Tennessee), which illustrates how a zone maintenance approach is configured.

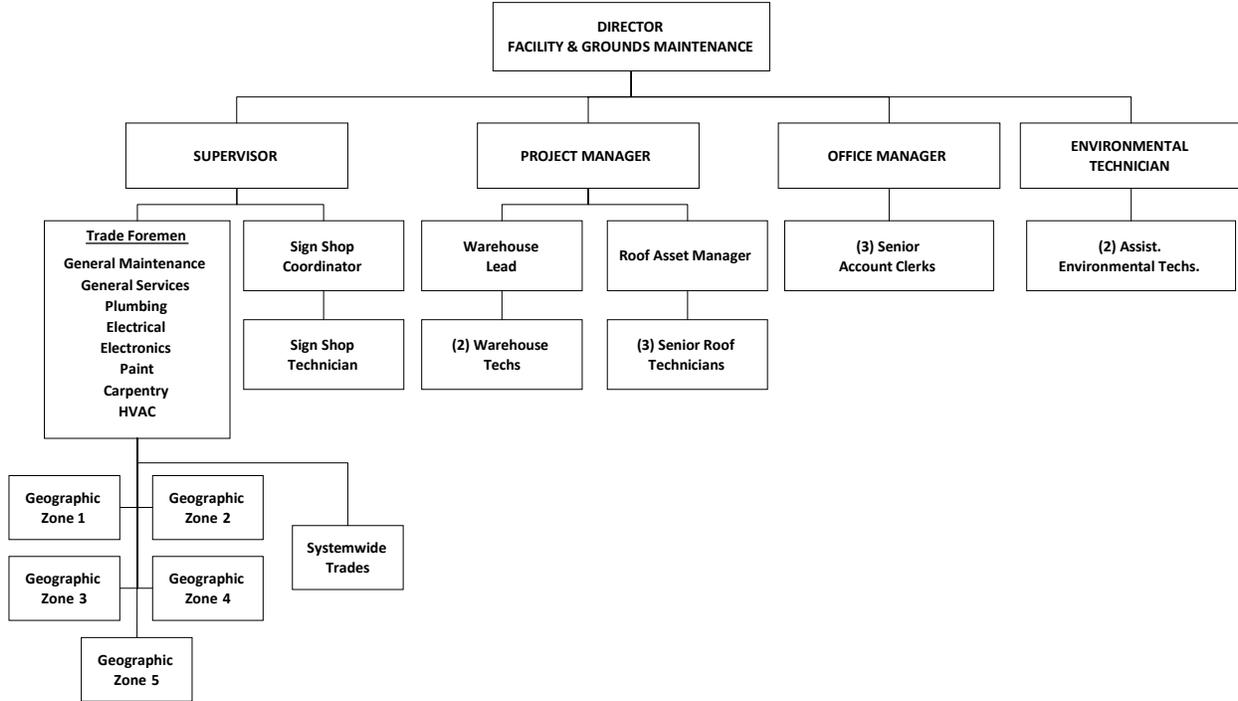
**Exhibit 6-34**  
**Sample Zone Maintenance Organization**  
**Shelby County Public Schools Facilities Service Department**



Source: Shelby County Public Schools, Facilities Services Department, August 2014.

**Exhibit 6-35** presents the proposed organization structure that illustrates how geographic zones would be managed in the School System’s Facility & Grounds Maintenance Department. For example, trade staff from each discipline such as plumbing, electrical, paint, carpentry, and HVAC should be assigned to support specific geographic zones. Trade foremen should continue to supervise and oversee trade staff that report to them. Trade staff with fewer employees such as locksmiths and cabinet makers should continue to report to the foreman that oversees their area; however, they should be assigned to the systemwide trade organizational unit, and support all geographic zones.

**Exhibit 6-35  
Metropolitan Nashville Public Schools Proposed High Level Facility & Grounds Maintenance  
Organization**



Source: McConnell Jones Lanier & Murphy LLP.

**FISCAL IMPACT**

The School System can implement this recommendation with existing resources.

**OBSERVATION 6-F**

**The School System does not fully leverage the functionality and features of its computerized work order management system to produce management reports to improve the overall performance and cost effectiveness of the Facility & Grounds Maintenance Department.**

The Facility & Grounds Maintenance Department uses SchoolDude Maintenance Direct corrective maintenance software as its computerized work order management system and is utilizing four out of eight of the main management reports. Maintenance Direct is a Cloud-based corrective work order management system that allows the department to manage the maintenance work order process for schools and administrative facilities throughout the School System from “request through completion.” According to a description of the features and functionality of Maintenance Direct listed in SchoolDude’s website, the system features include the following:

- allows administrators in schools and administrative facilities to submit work requests from their respective sites;
- routes, prioritizes, and ranks work order requests in real time by project, location, budget, and available inventory;
- enables maintenance staff to receive requests in the field, via mobile device, and notifies end-users about the status of their requests; and
- tracks all work orders submitted, and generates customizable reports to calculate budget and staffing needs.

School administrators and employees in the School System’s administrative facilities initiate most maintenance work order requests through SchoolDude, and the remaining requests are initiated through direct telephone calls to the Facility & Grounds Maintenance Department. The department prioritizes the work orders and assigns the maintenance task to the appropriate trade crew or individual. Once the crews or individuals complete the assigned maintenance tasks, the completed work order is returned, and SchoolDude updates its status “completed.” Once the system updates the status of the work order as “completed,” the work order is forwarded to the account clerk for any further processing.

Although SchoolDude has a variety of standard and customizable management reports that will allow the Facility & Grounds Maintenance Department to improve the overall performance of the work order process, the department does not effectively leverage the information these reports can provide to improve the performance of the School System’s maintenance function. For example, when the review team requested copies of all reports management used to track, monitor, and improve the maintenance work order process, they provided four reports that they routinely use: (1) Location Expenditures Summary, (2) Craft Expenditures Summary, (3) Detail Employee Cost Report and (4) Emergency Work Order Request. These reports do not track and measure responsiveness or overall performance—critical metrics for improving the service levels to schools and administrative facilities.

**Exhibit 6-36** presents a sample of the top standard and customizable reports included in SchoolDude’s Maintenance Direct work order management system.

**Exhibit 6-36**
**Sample Top Standard Work Order Management Reports in SchoolDude Maintenance Direct**

Report Description	Functionality	School System Uses Report?
<b>Work Order Summary 2:</b> <ul style="list-style-type: none"> <li>Report includes the work order status, the current "assigned to", requester, day's aged, total costs, and more.</li> <li>It can be grouped by location, craft, purpose, and "assigned to," and provide a total for each group as well as a grand total.</li> </ul>	<ul style="list-style-type: none"> <li>High level all-encompassing summary report.</li> <li>Shows date work order created, target completion date, actual completion date, days aged, labor hours, and costs.</li> <li>Helps maintenance managers keep abreast of what is going on in the organization.</li> </ul>	<b>No</b>
<b>Location Summary:</b> <ul style="list-style-type: none"> <li>Report provides a roll-up for each location, including total labor hours and labor costs, material costs, total cost by facility.</li> </ul>	<ul style="list-style-type: none"> <li>Breakdown of how resources were allocated to each location.</li> <li>Tracks labor hours and costs, materials costs, sales tax, total costs, cost per student, and cost per square foot by location.</li> </ul>	<b>Yes</b>
<b>Craft Summary:</b> <ul style="list-style-type: none"> <li>Report includes the number of hours dedicated to each craft, the number of work orders per craft, and the cost for labor and materials.</li> <li>Includes total percentage of work each craft accounts for.</li> </ul>	<ul style="list-style-type: none"> <li>Breakdown of where resources were spent in relation to the "type" of work being done.</li> <li>Tracks labor hours and costs, materials costs, sales tax, the number of work orders closed and in progress, average hours per work order, and average cost per work order by craft and location.</li> </ul>	<b>Yes</b>
<b>Purpose Summary:</b> <ul style="list-style-type: none"> <li>Report breaks down the number of work orders dedicated to each purpose code—such as preventive maintenance, reactive maintenance, tornado damage, capital request, etc.</li> <li>Includes total labor hours, labor and material costs, average hours, and average cost per work order.</li> </ul>	<ul style="list-style-type: none"> <li>Tracks and reports how resources were allocated based on the reason "why" requests were entered into the system.</li> </ul>	<b>No</b>
<b>Detail Employee Cost Report:</b> <ul style="list-style-type: none"> <li>Report provides a breakdown of each employee and the total number of hours they have tracked for a given reporting period.</li> <li>Includes the average number of hours each employee enters per work order, the average number of days it takes them to complete a work order, and the total number of work orders they worked on during the time period selected.</li> </ul>	<ul style="list-style-type: none"> <li>Tracks and manages the work load of each maintenance employee.</li> <li>Can generate report for a single employee, a team of employees, or all employees.</li> </ul>	<b>Yes</b>
<b>Transaction Detail (To Excel):</b> <ul style="list-style-type: none"> <li>Reports transaction type, description, quantity, cost, etc., as well as the work order description, location, craft, purpose code, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Can open report with Excel to create meaningful and powerful charts and tables to illustrate employee's workload, total costs allocated to various vendors and suppliers, etc.</li> </ul>	<b>No</b>

**Exhibit 6-36**
**Sample Top Standard Work Order Management Reports in SchoolDude Maintenance Direct (Cont'd)**

Report Description	Functionality	School System Uses Report?
<b>Budget Report:</b> <ul style="list-style-type: none"> <li>Report shows year-to-date costs from all work orders marked with a specific budget code, beginning budget amount, percent of budget spent, and remaining fiscal year amounts.</li> </ul>	<ul style="list-style-type: none"> <li>Tracks budget status by budget code.</li> </ul>	<b>No</b>
<b>Emergency Work Order Report:</b> <ul style="list-style-type: none"> <li>Report shows work order description, location, labor hours, labor cost, inventory cost, and total cost.</li> </ul>	<ul style="list-style-type: none"> <li>Tracks and manages emergency work orders.</li> </ul>	<b>Yes</b>

Source: Description of "Top Maintenance Direct Reports" provided by the Metropolitan Nashville Public Schools' Client Advisor at SchoolDude, July 2014.

**Exhibit 6-36** also shows that the Facility & Grounds Maintenance Department is using only four of the eight sample reports considered as "Top Maintenance Direct Reports." In addition, the Facility Planning & Construction Department does not specifically track labor and material costs for construction project. The department tracks the construction costs, but typically by either the various components/systems of the building or by the square footage costs in the contract with Heery International. Heery International is required to invoice time and expenses to each specific project. This data is not currently captured for the Metropolitan Nashville Public Schools project managers.

The interim director of the Facility & Grounds Maintenance Department, who was a supervisor in the department, acknowledged that he and other users of SchoolDude were not fully aware of Maintenance Direct's reporting capabilities. More significantly, the primary users of Maintenance Direct did not receive adequate training on how to use the management reporting and analytics features of the system to improve routine, corrective maintenance in schools and administrative facilities. As a result, the perception of the lack of responsiveness of the maintenance staff in completing work orders is a concern for support staff and teachers. The results from the opinion survey administered by the review team seem to support this lack of responsiveness. When asked if "buildings are properly maintained in a timely manner," 59.4 percent of support staff and 50.1 percent of teachers agreed or strongly agreed with this statement, while 37.1 percent of support staff and 47.8 percent of teachers disagree or strongly disagree with the same question.

Because Facility & Grounds Maintenance has not fully utilized the management reporting capabilities of the SchoolDude Maintenance Direct work order system, the department cannot monitor the overall performance, cost effectiveness, and customer service levels of the maintenance operation. Accordingly, the leadership within the department cannot effectively assist school and central administrators with goal-setting or establishing criteria to evaluate the effectiveness of the maintenance program, maintenance teams, or individual staff.

**RECOMMENDATION 6-F.1**

**Provide extensive training on the management reporting and analytical capabilities of the SchoolDude Maintenance Direct work order management system.**

The School System's director of Facility & Grounds Maintenance should provide mandatory training in the use of the management and analytical reporting capabilities of the Maintenance Direct work order management system for members of the department. This mandatory training must focus on using the management and analytical reporting capabilities of the work order management system to establish performance standards to define and document the time required to complete various maintenance activities, expected levels of responsiveness, expected quality levels, and the cost-effectiveness of completing specific maintenance jobs. The department will be able to leverage this extensive training to improve the performance and cost-effectiveness of the School System's maintenance program.

**FISCAL IMPACT**

The School System can implement this recommendation with existing resources, as technical assistance is available through an online format and telephone support. Any additional training required is provided at the cost agreed upon with the vendor.

**OBSERVATION 6-G**

**The Facility & Grounds Maintenance Department has not fully implemented a preventive maintenance program or predictive maintenance plan, nor has it developed a preventive maintenance schedule for each building to address ongoing school maintenance issues.**

Although the Facility & Grounds Maintenance Department has not fully implemented a comprehensive preventative maintenance plan or schedule, the department primarily conducts its preventative maintenance program in maintenance shops supporting systems requiring annual certifications. These systems include fire alarm, storm water, and heating, ventilation and air conditioning. The HVAC Shop has a preventative maintenance plan which includes changing filters quarterly, checking belts, greasing motors, and other tasks. Other shops maintain buildings with no moving parts; therefore, it is difficult to prevent damage in such areas. Accordingly, those shops (for example, Roof Asset Shop, Electrical Shop, and Paint Shop) have limited preventative maintenance plans.

Moreover, the Facility & Grounds Maintenance Department outsources preventative maintenance on chillers and boilers to private contractors, which is typically included in a preventative maintenance program.

**Exhibit 6-37** summarizes the preventative maintenance tasks identified by the department's division managers, and indicates the lack of a scheduled and comprehensive preventative maintenance program.

**Exhibit 6-37  
Metropolitan Nashville Public Schools  
Divisions' Description of Preventative Maintenance Practices – Planned and Unplanned**

Area	Description of Preventative Maintenance Practices
<b>Electronic Shop</b>	<ul style="list-style-type: none"> <li>• Certify fire alarm systems at each school.</li> <li>• Service and tag fire extinguishers at each school and location at least two to three times a year.</li> </ul>
<b>General Maintenance Shop</b>	<ul style="list-style-type: none"> <li>• Check the operating systems of bleachers, and grease.</li> <li>• Check stadiums and gyms for loose handrails and unsightly conditions.</li> <li>• Check playgrounds for faulty equipment.</li> </ul>
<b>Carpenter Shop</b>	<ul style="list-style-type: none"> <li>• The preventive maintenance program will be utilized once all the security locks are installed.</li> <li>• When completing a work order, staff should observe and fix any other carpenter-related issues.</li> </ul>
<b>Paint Shop</b>	<ul style="list-style-type: none"> <li>• Paint all football goal posts before every season.</li> <li>• Try to paint two high school football complexes every summer.</li> <li>• Try to seal the windows in various schools before cold weather.</li> <li>• Seal all wood bleacher boards.</li> </ul>
<b>Roof Asset Shop</b>	<ul style="list-style-type: none"> <li>• Began performing some preventative maintenance items last year. Limited on funds and employees and not able to implement the full use of preventative maintenance at this time.</li> <li>• Plan to routinely clean and inspect roofs, clean drains, gutters, and areas of debris—which will help prolong the life expectancy of roof systems.</li> </ul>
<b>Environmental Shop</b>	<ul style="list-style-type: none"> <li>• Wetting P-traps (plumbing fixture) before they go dry in areas that have a history of sewer gas.</li> <li>• Also inform the principal or custodian when dry traps are discovered so that work orders will not have to be submitted to solve these problems. Also suggest to the contractors—who screen and coat gym floors—to tape the exit doors to the gym to prevent the volatile smell from entering schools once they refinish them. When they fail to do this, then the Division's staff must do this to resolve odor concerns that result.</li> </ul>
<b>HVAC Shop</b>	<ul style="list-style-type: none"> <li>• Filter replacement by internal personnel quarterly. There are six HVAC filter trucks (52,000 filters a year).</li> <li>• Contractors perform preventive maintenance of central plant equipment, including water treatment for closed loop water systems, chillers, cooling towers, and boilers.               <ul style="list-style-type: none"> <li>– Water treatment for closed and open loop water systems.</li> <li>– Chiller preventative maintenance</li> <li>– Cooling tower preventative maintenance</li> </ul> </li> </ul>
<b>Plumbing Shop</b>	<ul style="list-style-type: none"> <li>• Winterize all stadiums after football season ends. This includes any irrigation systems as well as the back flow preventers.</li> <li>• Turn on all backflow preventers and check them out for leaks and functionality in the spring.</li> </ul>

**Exhibit 6-37**
**Metropolitan Nashville Public Schools**
**Divisions' Description of Preventative Maintenance Practices – Planned and Unplanned (Cont'd)**

Area	Description of Preventative Maintenance Practices
<b>Electrical Shop</b>	<ul style="list-style-type: none"> <li>• Preventative maintenance is done with other work order requests.</li> <li>• When wiring computer labs, if the lab needs five circuits, will pull two extra for future use.</li> <li>• If bulbs are out in an auditorium, replace them all instead of just the ones that are out, based on knowing how long the bulbs should last.</li> <li>• When pulling a panel cover for any reason, all hot wires and neutrals are tightened (they work loose over time and cause burn ups and shorts).</li> </ul>
<b>General Services</b>	<ul style="list-style-type: none"> <li>• Topping trees before the winter.</li> <li>• Removing limbs that are hanging over the roofs of schools to prevent clogging of the gutter system.</li> <li>• Landscaping and mulching in areas that are highly visible.</li> </ul>

Source: Metropolitan Nashville Public Schools, Facility & Grounds Maintenance Division Managers, February 2014.

Preventative maintenance is defined as planned actions undertaken to retain an item at a specified level of performance by providing repetitive scheduled tasks that prolong system operation and useful life. Tasks include inspection, cleaning, lubrication, and service and/or replacement conducted at regularly-scheduled intervals, based on average statistical or anticipated lifetime, or both.

Predictive maintenance techniques are designed to help determine the condition of in-service equipment in order to predict when maintenance should be performed. This approach promises cost-savings over routine or time-based preventative maintenance since tasks are performed only when warranted. The benefit of predicted maintenance is to allow convenient scheduling of corrective maintenance, and to prevent unexpected equipment failures. The key is "the right information at the right time". By knowing which equipment needs attention, maintenance work can be better planned (such as spare equipment parts, human resources, and other resources), and what would have been "unplanned-stops" are transformed to shorter, fewer "planned stops"—thus, increasing plant availability.

Other potential advantages include increased equipment lifetime, increased plant safety, fewer accidents with negative impact on the environment, and optimized spare parts handling. Predictive maintenance evaluates the condition of equipment by performing periodic or continuous (online) equipment condition monitoring. The ultimate goal of predictive maintenance is to perform maintenance at a scheduled point in time when the maintenance activity is most cost-effective and before the equipment loses performance within a threshold. This is in contrast to time- and/or operation count-based maintenance, in which a piece of equipment gets maintained, whether it needs it or not. Time-based maintenance is labor intensive, ineffective in identifying problems that develop between scheduled inspections, and is not cost-effective. Reliability-centered maintenance emphasizes the use of predictive maintenance techniques, in addition to traditional preventive measures.

Development of a preventative maintenance program is a critical component of a school system’s planning and budgeting for ongoing maintenance. The use of proactive maintenance programs, better known as a preventive maintenance program, reduces costs by routinely evaluating the cost to maintain specific facility programs and implementing strategies to reduce labor and long-term maintenance costs.

Typical preventive maintenance programs contain characteristics which include the following:

- list of equipment that require repair;
- detailed schedule of the cost of repair;
- timeline schedule for completion of projects; and
- inspection and maintenance procedures.

**Exhibit 6-38** presents the preventative maintenance program reported by peer school districts indicating inconsistent practices among the school systems.

**Exhibit 6-38  
Metropolitan Nashville Public Schools  
Peer Schools Preventative Maintenance Program**

Survey Question	Metropolitan Nashville Public Schools	Atlanta Public Schools	Duval County Public Schools	School Board of Polk County	Shelby County Schools
<b>General Preventative Maintenance</b>	Varies by shop. See Exhibit 6-37 above.	Conduct ongoing audits of the buildings including restrooms, lighting, ceiling tile, stairs, floors, paint, furniture, sprinklers, hoods, gutters, windows, etc. Spend approximately \$1,500,000 annually.	Plans and executes over 23,000 preventative maintenance work orders per year. Estimated cost is \$3,400,000.	Does not have a preventative maintenance program.	Work order system generates preventative maintenance tickets for filter changes, oil testing, and various other items.
<b>Heating, Ventilation, and Air Conditioning (HVAC) Preventative Maintenance</b>	No response. See Exhibit 6-37 above.	HVAC-Filter contract every 60 days; open/closed loop water treating pending, coil cleaning contract. Spend \$400,000 annually.			

**Exhibit 6-38**  
**Metropolitan Nashville Public Schools**  
**Peer Schools Preventative Maintenance Program (Cont'd)**

Survey Question	Metropolitan Nashville Public Schools	Atlanta Public Schools	Duval County Public Schools	School Board of Polk County	Shelby County Schools
<b>Challenges and Resolutions</b>	No response.	<ul style="list-style-type: none"> <li>• There was non-standardization of manufacturers/systems/equipment; tightened guidelines and standards.</li> <li>• Issue with cleanliness of restrooms; using epoxy floors.</li> <li>• Issue with flooding by stuffing paper towels in the sinks; changed to metered faucets to control water usage.</li> <li>• Handrails required regular painting; changed to all stainless touch components.</li> </ul>	More funding needed.	More funding needed.	Lack of manpower; resolved by adding machinery to replace manpower.

Source: McConnell Jones Lanier & Murphy LLP Peer Survey, June 2014.

Facilities maintenance best practices show that a widely-used strategy to contain maintenance operations costs involves developing and implementing a preventive maintenance program. Preventative maintenance provides a planned approach—designed to avoid equipment breakdowns and prevent small problems from escalating into major ones. **Exhibit 6-39** presents an excerpt from a sample preventive maintenance program.

**Exhibit 6-39  
Sample Preventive Maintenance Program Excerpts**

Area	Component	Inspection & Repair (3-6 Month Intervals)	Inspection & Repair Annually	Inspection & Repair (2-5 Year Intervals)	Inspection & Replacement (7-10 Year Intervals)	Inspection & Replacement (12-15 Years)
<b>Exterior</b>	Roof		X	X		X
	Roof Drainage		X	X		
	Windows & Glass		X	X	X	
	Masonry		X	X		
	Foundations		X			X
	Joints & Sealants		X		X	
<b>Equipment</b>	Belts & Filters	X				
	Motors & Fans	X		X		X
	Pipes & Fittings	X			X	
	Ductwork		X		X	
	Electrical Controls		X		X	
	Heating Equip.	X			X	
	Air-conditioning Equip.	X			X	
<b>Interior</b>	Doors & Hardware		X			X
	Wall Finishes		X			X
	Floor Finishes		X		X	
<b>Site</b>	Parking & Walks		X	X		
	Drainage		X	X		
	Landscaping	X			X	
	Play Equipment		X		X	

Source: Developed by McConnell Jones Lanier & Murphy LLP.

Many districts establish regularly-scheduled reviews of facilities and fixed assets and fund priority and preventive maintenance, annually, through their maintenance and operations budgets.

Since Facility & Grounds Maintenance uses the SchoolDude Maintenance Direct system, the department can enter preventative maintenance work orders in the system and run reports in Maintenance Direct, filtering the purpose code of preventative maintenance. The equipment report module allows users to select “Summary Report- Maintenance Costs versus Preventive Maintenance Costs” and the report will segregate the reactive maintenance and preventative maintenance costs for the School Systems equipment.

**RECOMMENDATION 6-G.1**

**Enhance the School System’s preventative maintenance program by developing and implementing a formal, documented preventative and predictive program containing regularly scheduled maintenance and repair activities.**

Facility & Grounds Maintenance management should enhance the School System’s preventative maintenance program to include documenting and implementing a comprehensive, detailed preventive maintenance schedule for all maintenance projects in the School System—and prioritize these projects

by school, and administrative support facility, for both facilities and equipment. A timeline for completing preventive maintenance projects should also be established.

In addition, the capabilities within the SchoolDude work order system should be understood and implemented to schedule and report on the status of the preventative and predictive maintenance programs.

After developing the preventative and predictive maintenance programs, the School System should adequately fund its preventative maintenance budget to address the scheduled preventative maintenance activities at targeted facilities.

### **FISCAL IMPACT**

The development of the preventative and predictive maintenance programs can be completed with existing resources.

### **OBSERVATION 6-H**

**The Facility & Grounds Maintenance Department has compiled a detailed summary listing of its potential deferred maintenance projects, but has not developed a formal deferred maintenance plan.**

The Facility & Grounds Maintenance Department currently summarizes its proposed deferred maintenance projects in a Microsoft Excel spreadsheet that it uses to present its annual funded projects related to the School System's 2012–2018 Capital Improvement Budget. The spreadsheet named "Capital Improvement Budget", in its present form, does not include assumptions the department used to determine deferred maintenance needs, the year that maintenance should be performed, and related authorization of deferred maintenance projects.

The Capital Budget is made up of a six-year list of projects approved annually by the Board of Education. With board approval, the School System submits the Capital Budget to the mayor and Metropolitan Nashville Government director of finance who review the budget along with capital budgets from all other Metropolitan Nashville Government departments, make changes, and submit a full capital spending proposal to the Metropolitan Nashville Council for funding approval. Depending on the city's bonding capacity and specific needs, Metropolitan Nashville Council may not appropriate all the capital funds the School System requests. Accordingly, the appropriation approved by Metropolitan Nashville Council may be less than the dollars needed to completely fund the School System's Capital Budget. For example, Metropolitan Nashville Public Schools did not receive capital budget funds (which include the deferred maintenance budget) for 2011-2012. If an allocation is given, projects listed within the Capital Budget are prioritized funded. School System management reported that often Metropolitan Nashville Government does not provide sufficient funding to support critical needs such as the deferred maintenance program.

Although the School System's capital improvement budget for 2012-2013 included \$3,000,000 for "miscellaneous deferred maintenance projects," The Facilities & Grounds Department did not provide a list of specific deferred maintenance projects. Additionally, capital improvement budgets provided for 2010-2011 and 2013-2014 did not include a specific category for deferred maintenance projects.

Deferred maintenance is maintenance that was not performed when it should have been or was scheduled to be, and was delayed to a future period. Such situations generally arise because of shortages of funds, personnel, or specific management practices. Some educational institutions require inspection programs and systems to identify and track deferred maintenance and capital renewal needs. The purpose of a facility audit and inspection program is to identify, quantify (provide budget estimates), and prioritize deferred maintenance projects and capital renewal and replacement projects, according to the urgency of need and significance to the institution's mission.

Duval County Public Schools (Jacksonville, Florida) manages deferred maintenance using a living maintenance backlog and tracking system. Shelby County Schools (Memphis, Tennessee) maintains a 10-year maintenance plan including deferred maintenance and partially based on repeat work orders. The following process is implemented by the University of California to document deferred maintenance needs and budget.

### 1. Facility Audit and Inspection

Maintenance departments physically inspect facilities to identify deferred maintenance and capital renewal needs and/or projects.

### 2. Prioritization

Identified projects are prioritized based on the following criteria:

**Priority 1: Currently Critical.** These are needs and/or projects which significantly impact the mission of the institution and require immediate action to return a facility to normal operation, stop accelerated deterioration, or correct a cited safety hazard—especially those conditions that potentially impact an entire campus, or pose a significant risk to health and safety. Examples of such conditions would include the following:

- *campus impact: A Campus-wide chilled water system is in imminent danger of failing. Failure would make all buildings non-functional, essentially negatively impacting the entire campus.*
- *health and Safety Impact: Previously undiscovered dry rot has compromised structural beams. The building cannot be safely occupied without immediate repair.*

**Priority 2: Potentially Critical.** These are needs and/or projects that will become critical within a year if not corrected expeditiously. Situations in this category include intermittent interruptions, rapid deterioration, and potential safety hazards. The significance of these conditions to the mission of the institution should be a factor.

**Priority 3: Necessary, Not Yet Critical.** These are needs and/or projects that include conditions requiring reasonably prompt attention to preclude predictable deterioration or potential downtime, and the associated damage or higher costs, if deferred further. Conditions not significantly impacting the mission of the institution should be placed in this category.

### 3. Further Project Categorization

Upon completing the two-step Facility Audit and Inspection Program procedure, categorize projects as deferred maintenance or capital renewal and replacement.

### 4. Deferred Maintenance Projects

As a general rule, the scope of deferred maintenance projects should be limited to a specific work item, or set of integrally-related work items, in a:

1. single building or group of buildings.
2. clearly identifiable component of a grounds area.
3. utilities system.

The project should be accomplished under a single contract or work order.

For administrative simplification, no deferred maintenance project should be smaller than \$5,000. Projects under \$5,000 should be funded from regular maintenance funds. For planning, budgeting, and implementing purposes, similar work items of small value may be aggregated to make a reasonably-sized project, if the items are of equal priority and if they are intended to be accomplished within the fiscal year. Major work items, however, in individual buildings—separately identifiable grounds areas, or utilities systems—are considered separate projects and are not to be aggregated.

#### RECOMMENDATION 6-H.1

##### **Develop and maintain a formal deferred maintenance plan.**

The Facility & Grounds Maintenance Department should inspect, track, prioritize, and estimate the cost of deferred maintenance projects annually. As funding becomes available, the School System's chief financial officer should issue instructions for submitting a prioritized list of deferred maintenance projects for completion in a given year.

#### FISCAL IMPACT

Development of the deferred maintenance plan can be done with existing resources.

#### OBSERVATION 6-I

##### **The Facility & Grounds Maintenance Department lacks a comprehensive training plan.**

Each division in the department has a different set of skills in which employees are trained to perform their work. Facility & Grounds Maintenance staff indicated that additional training is needed for their specific trade skills and in the use of technology. Some training is mandatory for certifications, such as those required for lead-based paint assessment and abatement, locksmiths, heating, ventilation and air conditioning systems, and boiler safety and service.

Training recommendations from the Facility & Grounds Maintenance staff included the following:

- radon training to enhance understanding of factors that affect radon levels in buildings. Local government ordinances regulate the tolerance levels in all classrooms;
- proxy lock training, as these locks are becoming more widely used at campuses;
- use of SchoolDude Maintenance Direct work order system and work order categories to provide more accurate accounting of the type of work performed, and other software applications including AutoCAD, Excel, and Word. Improved communication devices such as wireless access in the maintenance operations building is needed to support the use of technology;
- increased cross-training as the employee buy-out retirement program will result in the loss of key personnel and skills; and
- periodic training in trade skills and equipment and safety practices.

**Exhibit 6-40** presents the training hours and types of training reported by peer school districts for 2012-2013.

**Exhibit 6-40  
Peer Schools Training Program 2012-2013**

Survey Question	Metropolitan Nashville Public Schools	Atlanta Public Schools	Duval County Public Schools	School Board of Polk County	Shelby County Schools
<b>MAINTENANCE</b>					
Average training hours	No response	20 hours	11 hours or 3,444 total man hours	0	10 hours
Type of training	No response	Electrical, plumbing, carpentry, ladder safety, building audits, paint preparation and application, asbestos	Craft specific DVDs, PowerPoint presentations for specific classes with testing materials	Not applicable	Product training
<b>GROUND</b>					
Average training hours	No response	20 hours	12 hours or 396 total man hours	8 hours	15 hours
Type of training	No response	Chainsaw safety, lift safety, district policy	Craft specific DVDs, PowerPoint presentations for specific classes with testing materials	No response	Product training, SOP training

Source: McConnell Jones Lanier & Murphy LLP Peer Survey, June 2014.

Appropriate training could greatly improve the department’s automation and operating efficiency. Adequate training ensures that School System employees understand the scope of their responsibilities and performance expectations, and serves to update skills and knowledge necessary for employees to effectively and efficiently perform their duties.

Appropriate training must address maintenance, specialized trades, grounds keeping, and be tailored to meet the needs of the specific function. In addition, training in maintenance-related activities such as operating procedures, use of tools, proper lifting techniques, workplace safety, hazardous materials handling, and emergency procedures is a necessity for all employees. A district can use a variety of

training sources—including vendors and manufacturers of their supplies and equipment, contract trainers, and professional association meetings.

#### **RECOMMENDATION 6-I.1**

##### **Perform a training needs assessment and develop an annual training plan to improve the overall skills and efficiency of Facility & Grounds Maintenance staff.**

Based on the training needs assessment, Facility & Grounds Maintenance management should explore a combination of in-house and external training programs that provide information on topical areas such as new techniques related to operating procedures for equipment for crafts and grounds personnel. Administrative staff should seek training for data management and effective management report preparation. In-house or external training programs should be evaluated for consideration, based on cost and training content. The concept of training a small number of employees and requiring them to share information with other departmental staff should also be considered. An evaluation component should be included in all training so that employee feedback can be used to improve future training.

Copies of training records should be retained as documentation by the department. The Facility & Grounds Maintenance Department should maintain copies of the attendance sheets for in-house training with all of the participant's signatures. Participation in outside training events should be documented through either certificate of completion or attendance sheets.

#### **FISCAL IMPACT**

The training assessment can be completed with existing resources. The cost of training cannot be determined until the training plan is completed.

### **ENERGY MANAGEMENT**

#### **OBSERVATION 6-J**

**The School System has neither a comprehensive energy management program to effectively plan energy use, nor does it have an in-house energy manager to coordinate energy management programs and continuously evaluate energy use to reduce energy costs.**

The Facility Planning & Construction Department is responsible for implementing the latest energy saving technologies for new schools, including energy management systems; energy efficient heating ventilation and air conditioning equipment; various wall and roof insulation materials and techniques; geothermal heat pump systems; and Leadership in Energy & Environmental Design Building Certification. Moreover, the Heating Ventilation and Air Conditioning trade area of the Facility & Grounds Maintenance Department is responsible for applying basic engineering fundamentals to heating, ventilation, and air conditioning systems to maintain the School System's buildings and facilities at their most energy efficient levels.

In the absence of a dedicated energy manager to oversee the School System’s energy management function, the School System has implemented two important energy initiatives. One initiative involves participation in a Demand Shedding Program sponsored by the Tennessee Valley Authority. The agency pays a fee based on how much the participant’s energy use is reduced when requested to lessen their use. This program is provided at no cost to the School System because the Tennessee Valley Authority installs all of the equipment in schools at its own expense. The second initiative involves the School System executing a five-year contract with Facility Services, Inc., in January 2010, to provide commissioning, utilities management, energy conservation projects, and energy management operating systems. The contract is set to expire in January 2015. According to the proposed scope of services from the proposal included in the contract, the company is to *“continually work to reduce energy and fuel consumption of the School System’s facilities through management of utilities, energy conservation projects, and verifying the design of energy efficient systems.”*

**Exhibit 6-41** summarizes the specific services that the contractor, Inc. proposed to provide to the School System.

**Exhibit 6-41  
Facility Services, Inc. Energy Management Contract Summary of  
Contracted Energy Management Services**

Category	Specific Services Per Contract	Services Provided
<b>Utilities</b>	<ul style="list-style-type: none"> <li>• Manage all utilities, including electricity, gas, and water.</li> <li>• Review, select, implement, and maintain an energy management tracking software computer program for billing, measurement, and trending of utilities.</li> </ul>	No
<b>Energy Conservation Projects</b>	<ul style="list-style-type: none"> <li>• Provide oversight and coordination of ongoing energy-related projects. Work with the director of Facility &amp; Grounds Maintenance, personnel, and current Energy Service Company in evaluating and implementing energy conservation projects, improving the efficiency of existing equipment, and properly maintaining facilities to better manage energy and reduce consumption.</li> <li>• Along with the Energy Service Company, assist in the development and review of technical data, estimates, and applications for financial assistance with energy construction projects.</li> </ul>	No
<b>Planning and Construction</b>	<ul style="list-style-type: none"> <li>• Work directly with the Facility Planning &amp; Construction Department to coordinate and administer contract documents for energy-related renovations and new construction to ensure that the contract documents provide for optimal energy consumption.</li> <li>• Coordinate plans and specifications and/or verify the design of energy efficient systems for buildings.</li> <li>• Coordinate with outside designers involved in all projects with a potential to save energy.</li> <li>• Coordinate and work with School System project managers and contractors involved in energy-related projects.</li> </ul>	Yes
<b>Commissioning</b>	<ul style="list-style-type: none"> <li>• Provide building commissioning services for new construction, retro-commissioning for remodeled or existing facilities, and specific equipment or component commissioning as directed by the director of Facility Planning &amp; Construction.</li> </ul>	Yes

**Exhibit 6-41  
Facility Services, Inc. Energy Management Contract Summary of  
Contracted Energy Management Services**

Category	Specific Services Per Contract	Services Provided
<b>Operations</b>	<ul style="list-style-type: none"> <li>Oversee the planning, implementation, operation, and maintenance of a global Energy Management Control System involving networking of devices in various buildings to an operations command center.</li> <li>Coordinate work responsibilities, assignments, and communications with Facility &amp; Grounds Maintenance Departments and with other managers, administrators, and professionals related to facilities.</li> <li>Ensure continued energy conservation measures by coordinating periodic odd-hour inspections, and by monitoring the Energy Management Control System as needed to verify continued functions and controls.</li> <li>Assist director of Facility &amp; Grounds Maintenance as necessary to troubleshoot HVAC operation and measurement issues. Assist in evaluating complaints for various items including, but not limited to space comfort and indoor air quality.</li> <li>Provide training of school personnel and maintenance, and manages staff, as appropriate, to ensure the efficient operation of school facilities</li> </ul>	No
Category	Specific Services Per Contract	Services Provided
<b>Communications</b>	<ul style="list-style-type: none"> <li>Solicit the involvement of faculty, staff, and students in the "energy conservation process."</li> <li>Develop and publish an Energy Management Newsletter as necessary to report and educate about energy issues.</li> <li>Stay informed of changing laws, codes, and other pertinent information that would have an effect on the energy use and fuel-run systems through publications and seminars.</li> <li>Develop and submit periodic reports regarding energy conservation efforts and results to the School System's administration and the Board of Trustees as required.</li> </ul>	No

Source: Metropolitan Nashville Public Schools, Facility Services, Inc. Energy Management Contract, executed January 26, 2010.

Despite the existing division of responsibility for energy planning for new facilities and energy management for existing and new facilities, and the existing energy management contract with Facility Services, Inc., the School System has no comprehensive energy management plan or central point of accountability to effectively plan, manage, regulate, and monitor energy use in its facilities.

**Exhibit 6-42** presents the School System's actual net energy costs for 2011-2012, 2012-2013, and 2013-2014 and shows that total energy costs have risen a cumulative 8 percent over the past three fiscal years. Several factors could have contributed to this increase such as temperature differences, energy demand increases, and the addition of 200,000 square feet in new facilities. However, the bottom line is that the School System does not actively monitor energy usage, which is one of the most critical factors in implementing an energy management plan and controlling costs.

**Exhibit 6-42  
Metropolitan Nashville Public Schools  
Energy Costs**

Utility	2011–2012	2012–2013	2013–2014
Electricity	\$18,331,916	\$18,590,757	\$19,476,359
Natural Gas	\$2,339,330	\$2,527,456	\$3,091,750
Water & Sewer	\$3,113,353	\$3,091,922	\$3,029,220
<b>Total</b>	<b>\$23,784,599</b>	<b>\$24,210,135</b>	<b>\$25,597,329</b>
<b>Percent Increase 2011-2012 through 2013-2014</b>			<b>8%</b>

Source: Metropolitan Nashville Public Schools, Financial Reporting & Budget Department, August 2014.

In addition to rising energy costs, the School System also has different building automation systems monitoring energy consumption throughout its schools and administrative facilities, which is further evidence of the absence of comprehensive energy management program or central point of accountability for energy management. For example, the School System has 96 sites with four separate building automation systems for energy management. Two energy management specialists in the heating, ventilation, and air conditioning (HVAC) trade area maintain these four disparate energy management systems. **Exhibit 6-43** presents a summary of the four energy management systems and the corresponding number of facilities the systems monitor.

**Exhibit 6-43  
Metropolitan Nashville Public Schools  
Current Energy Management and Monitoring Systems**

Energy Management and Monitoring System	Description/Capabilities/Comments	Number of Facilities (Sites)
System 1	Antiquated system that is over 25 years old and 90 percent of the systems provide only monitoring rather than energy management functionality. System cannot schedule energy-saving events, set-back temperatures, or provide usage trends for analysis. The School System is replacing these systems in-house with capital improvement funds at a rate of five to seven systems per year.	31
System 2	Basic building automation system that can monitor, schedule, set points, set-back temperatures, usage trends, reporting, and alarm. Programming is not user-friendly and the system has hardware issues from time-to-time	13
System 3	Extensive building automation system monitoring and scheduling. System can change all set points, set-back temperatures, monitor trending, reporting, and alarm. Programming is user friendly, and can easily manage trouble shooting and diagnostics at the server or on site.	28
System 4	Basic building automation system that can monitor, schedule, set points, set-back temperatures, usage trends, reporting, and alarm. Programming is not user-friendly. Server routinely crashes and department needs to replace server hardware.	24
<b>Total Sites</b>		<b>96</b>

Source: Metropolitan Nashville Public Schools, Facility & Grounds Maintenance Department Interviews and E-mail Communication, February 2014.

**Exhibit 6-43** further shows differences in functionality and capabilities of the existing energy management system. These disparities in functionality, features, and programming illustrate the need for a strategic, coordinated energy management program with centralized oversight by a capable energy manager.

Energy costs across the nation have greatly increased over the last several years to levels that require close monitoring and management. Energy management is a vital tool to ensure the cost-effective operation of utilities in the School System's schools and administrative facilities. Energy audits and other sources of data are essential to controlling costs. Management uses data gathered from energy audits to determine priorities, and to evaluate the success of a program. While the purpose of an energy management program is to minimize waste, the program should also ensure comfort in occupied spaces and encourage energy awareness across the district.

An energy manager plans, regulates, and monitors energy use in an organization or facility. They aim to improve energy efficiency by evaluating energy use and by implementing new policies and changes as necessary.

#### **RECOMMENDATION 6-J.1**

**Hire an in-house energy manager to provide a central point of oversight and accountability to control energy costs.**

The School System should hire a seasoned energy manager to oversee the system's energy management program and provide a central point of accountability for developing a comprehensive energy conservation program, reducing energy costs over the long-term. The energy manager should report to the director of Facility Planning & Construction and have the following responsibilities, which include:

- develop a comprehensive energy management program, and regulate and monitor energy use in schools and facilities, including implementing one efficient building automation system for all facilities;
- improve energy efficiency by evaluating energy use and implementing new energy management policies and changes where necessary; and
- coordinate all aspects of energy management, including energy efficiency, waste management, energy audits, building operating procedures, and guidelines for conserving energy, and energy conservation awareness.

#### **FISCAL IMPACT**

The implementation of this recommendation will require the School System to invest in an energy manager. Beginning in 2014-2015, the School System will incur a partial annual salary cost for an energy manager. According to Salary.com, the median annual salary for an energy manager in the Nashville, Tennessee market is \$91,196 before fringe benefits. Assuming the School System hires the energy manager with an April 1, 2015 start date, the investment in 2014-2015 will be \$22,799, representing 25

percent of the energy manager's annual salary. Beginning in 2015-2016, the annual investment will be \$91,196, representing a full year's salary.

#### **RECOMMENDATION 6-J.2**

##### **Develop and implement a comprehensive energy management program.**

Once the School System hires the energy manager, the Facility Planning & Construction Department— in collaboration with the Facility & Grounds Maintenance Department—should develop, document, circulate, and implement a comprehensive energy management program that includes a written energy conservation plan.

One of the first and most important steps in developing a comprehensive energy management program is implementing the industry-recognized best practice of conducting periodic energy audits. Annual energy audits detect energy usage patterns and identify areas of possible energy inefficiency. The energy manager should work with the director of Facility Planning & Construction, and the director of Facility & Grounds Maintenance Department, to identify a single building automation system to capture, analyze, and monitor energy usage and cost data by location, and audit this information annually. The annual audits will allow the School System to target specific schools and other facilities for more intensive monitoring based on unusual spikes.

A comprehensive energy management program contains the following features which include:

- a written energy conservation and management plan with short-term and long-term energy conservation goals;
- a management staff person assigned to review the utility bills monthly using a customized spreadsheet or database that functions as a database for storing monthly bills and energy usage (It is helpful for the data to have visual aids such as graphs that automatically update when entering new data.);
- an annual energy audit to monitor and track energy usage by school or administrative facility, targeting those facilities with higher than average energy use statistics;
- comprehensive energy equipment audits every five years to ensure that heating, ventilation, air conditioning, and lighting retrofits are up to date and energy efficient; and
- collaboration with utility providers, government agencies, and local industry experts to identify energy efficient benchmarks and implement strategies to increase cost-efficiency.

#### **FISCAL IMPACT**

When the School System conducts an energy audit, the potential savings can be determined. A conservative projection is 5 percent savings annually of electricity costs or \$973,818 (\$19,476,359 electricity costs times 5 percent) beginning in 2015-2016.

## ALTERNATIVE SOURCING AND LEVERAGING OPPORTUNITIES

### **LEVERAGING METROPOLITAN NASHVILLE GOVERNMENT**

The review team explored whether there would be a strategic advantage to leveraging maintenance resources provided by the Metropolitan Nashville Government Building Operations Department within the City's General Services Division and the School System. Strategically leveraging resources is also known as a shared services model. Shared services models can exist between two or more entities whereby one of the entities will provide a service or combine services to reduce cost for both entities.

Three factors were considered when evaluating the feasibility of implementing a shared services maintenance model between Metropolitan Nashville Government Building Operations Department and the School System. These factors were the feasibility of (1) consolidating executive leadership of the two departments; (2) planning; and (3) executing day-to-day maintenance operations.

The review team believes that it is possible to consolidate the executive leadership (director-level position) of Metropolitan Nashville Government Building Operations Department and the School System's Facility & Grounds Maintenance Department and structure an appropriate span of control for direct reports and line-level staff such as trade employees so that they have adequate supervision and quality oversight. The executive leadership position, with the appropriate facilities background could also oversee and implement the planning functions for both the Metropolitan Nashville Government Building Operations Department and the School System, even though the major focuses of the two departments are different.

The major difficulty in executing an efficient and cost-effective shared services model for the two departments would arise in the integration of two different computerized maintenance work order management systems, which are critical to executing day-to-day operation and restructuring trade staff crews to accommodate both departments. The Metropolitan Nashville Government Building Operations Department has implemented the BOSS Solutions maintenance work order management system. This system is designed mainly for commercial building use. The School System has invested considerable resources and time in the implementation of the SchoolDude Maintenance Direct work order system, which was designed exclusively for the needs of facilities maintenance, information technology, and energy needs for educational institutions. The amount of time, effort, and resources required to identify and implement compatible work maintenance management systems and reorganize maintenance trade staff would likely outweigh the benefits of shared services. This conclusion is also evidenced by the fact that major outsourcing entities that specialize in facilities privatization, implement distinctly separate business units for management of commercial type buildings and educational facilities.

## **PRIVATIZATION/OUTSOURCING POSSIBILITIES**

The review team also explored the feasibility of outsourcing additional functions within the School System’s Facility & Grounds Maintenance Department to further reduce operating costs. As noted in Accomplishment 1-A, the School System successfully outsourced custodial and grounds keeping services to GCA Services Group and Landscape Services, Inc., respectively, in May 2010. Private companies often provide contracted facility management services to manage facilities support functions to reduce operating costs, increase productivity, and improve the quality of service.

Since the School System has already outsourced custodial and grounds keeping services, our analysis focuses on the potential opportunity to outsource maintenance and energy management services—especially since our observations in this chapter indicate challenges within the existing maintenance functions which include:

- the absence of a comprehensive preventative maintenance program and an accompanying preventive maintenance schedule for each building to address ongoing school maintenance issues;
- the absence of a comprehensive energy management program and in-house energy manager to provide a central point of oversight and accountability for reducing energy costs;
- the inability of the Facility & Grounds Maintenance Department to maximize the use of its automated work order system to improve responsiveness and attendant service levels; and
- the absence of a comprehensive training plan to ensure the department has a crew of highly skilled, well-trained maintenance personnel.

At the review team’s request, one national facilities management outsource provider analyzed the School System’s facility maintenance and two national facilities management outsource providers analyzed the energy management operations based on specific criteria, and related data to identify cost-savings opportunities—if they were to become the outsourced facilities maintenance management company. We provided the national companies with a “Confidential Response to Information Request,” for each to use in developing cost estimates to provide comprehensive facilities maintenance services to the School System. The information request included the following:

- current scope of work of the maintenance organization within the Facility & Grounds Maintenance Department;
- copies of the current Facility & Grounds Maintenance Department’s budget, including separate budgets for maintenance and supplies expenditures;
- detailed break-out of maintenance program costs, including identifying professional services purchased;
- list of the age of each school and location;
- gross square footage of school buildings;
- number of employees and number of hours employees work annually, including full-time and part-time employees;

- number of paid non-work days such as holidays, vacation, and sick time;
- unionization of employees;
- annual expenditures for electricity, gas, and water;
- description of the department’s Computerized Maintenance Management System and related work order statistics for 2012-2013;
- fleet costs; and
- construction supervision.

From this baseline information, the national facilities management outsource providers analyzed the Facility & Grounds Maintenance Department’s financial structure and budget to develop total maintenance and energy costs per square foot for the department. The maintenance cost per square foot included both supply and labor costs, which the outsource provider compared to industry benchmarks to develop its cost estimates. The energy cost per square foot included electricity, water and sewage, and natural gas costs.

**Exhibit 6-44** presents a summary of both national facilities management outsource providers’ feasibility studies to provide outsourced services to the School System.

**Exhibit 6-44  
Summary of National Facilities Management Outsource Providers’  
Feasibility Studies to Outsource Maintenance Management**

Category	Provider “A”	Provider “B”
<b>Information Reviewed and Analyzed</b>	<ul style="list-style-type: none"> <li>• Enrollment</li> <li>• Square footage</li> <li>• Labor hours and cost</li> <li>• Productivity</li> <li>• Cost structure</li> <li>• Work order statistics</li> <li>• Utility budget</li> </ul>	<ul style="list-style-type: none"> <li>• Gross Square Footage of school buildings</li> <li>• Current budget</li> <li>• Facility inventory and age</li> <li>• Computerized Maintenance Management System (name of system)</li> <li>• Annual spend on gas, electricity, and water</li> </ul>
<b>Information not Reviewed and Analyzed</b>	<ul style="list-style-type: none"> <li>• Building layout and structures</li> <li>• Major mechanical systems and condition</li> <li>• Building loads</li> <li>• Technology systems</li> <li>• Training and development of staff</li> <li>• Health and safety standards</li> <li>• Building administration issues and concerns</li> </ul>	

**Exhibit 6-44  
Summary of National Facilities Management Outsource Providers'  
Feasibility Studies to Outsource Maintenance Management (Cont'd)**

Category	Provider "A"	Provider "B"
<b>Baseline Information</b>	<ul style="list-style-type: none"> <li>• Average Daily Attendance: 74,035</li> <li>• Gross Square Footage: 14,154,857</li> <li>• Days of Operation Planned: 175</li> <li>• Number of Structures: 160</li> <li>• Program Budget: \$18,636,000</li> <li>• Cost per Square Foot: \$1.32</li> <li>• Supply Cost per Square Foot: \$0.39 [29 percent]</li> <li>• Labor Cost per Square Foot: \$0.85 [64 percent]</li> <li>• Total Full-Time Equivalents: 204</li> <li>• Productivity per Full Time Equivalent: 66,422</li> <li>• Energy Cost per Square Foot based on 2013-2014 budgeted electricity and natural gas cost totaling \$27,130,900: \$1.92</li> </ul>	<ul style="list-style-type: none"> <li>• Gross Square Footage: 14,154,857</li> <li>• Days of Operation Planned: 248 [52 weeks x 5 days per week – 12 holidays]</li> <li>• Number of Structures: 160</li> </ul>
<b>Findings</b>	<ul style="list-style-type: none"> <li>• Supply costs are three percent lower than private sector benchmarks.</li> <li>• Labor costs are eight percent – 37 percent above benchmark standards.</li> <li>• The number of fleet vehicles may be in line with benchmarks, but the department does not appear to bear the total cost of the fleet</li> <li>• Total maintenance cost per square foot exceeds Provider A's benchmarks by \$0.23 per square foot when compared to the low range; and is \$0.12 per square foot less than the benchmark when compared to the high range.</li> <li>• Energy cost per square foot is \$0.34 to \$0.59 per square foot higher than Provider A's national benchmark standards for its outsourced energy management programs.</li> </ul>	<ul style="list-style-type: none"> <li>• Energy Cost per square foot is 15-20 percent higher than Provider B's national benchmark standards for average annual energy cost per square foot for its outsourced energy management programs.</li> </ul>

*Source: Confidential Maintenance Feasibility Studies provided by two national facilities outsource providers at McConnell Jones Lanier & Murphy LLP's request, July 2014.*

**Exhibit 6-44** shows that Provider A based its cost estimate on findings which determined that the Facility & Grounds Maintenance Department exceeded benchmark standards in the facilities management industry established for labor costs per square foot and total maintenance cost per square foot. Providers A and B estimated that the School System's energy cost per square foot exceeded the average annual energy cost per square foot for organizations that contracted their energy management programs to them as an outsourced energy management solution.

While both Providers A and B focused their analysis on discrete components of the baseline information they requested, they clearly indicated in their responses that their cost estimates are based on their

review and analysis of information the review team provided. Accordingly, neither conducted a formal site visit to review building layouts, condition of buildings, technology systems, or staffing patterns, etc. As a result, the cost estimates provided represent an opportunity to reduce the School System’s maintenance operating and energy costs through an outsourcing solution that must be the result of a comprehensive request for proposals process. **Exhibit 6-45** compares the range of estimated cost-savings opportunities based on both providers’ low and high levels, which compared the Facility & Grounds Maintenance Department’s current financial and productivity levels to industry benchmarks.

**Exhibit 6-45  
Estimated Cost Savings Opportunity to Outsource Maintenance Management  
and Energy Management to a National Facilities Management Outsource Provider**

Variable	Outsource Provider A		Outsource Provider B	
	Low Range Cost Savings Estimate	High Range Cost Savings Estimate	Low Range Cost Savings Estimate	High Range Cost Savings Estimate
School System’s total maintenance cost per square foot	\$1.32	\$1.32		
Estimated outsourced cost per square foot	\$1.35	\$1.05		
Estimated savings per square foot	(\$0.03)	\$0.27		
Gross Square Footage *	14,154,857	14,154,857		
<b>Estimated annual savings (cost) for maintenance management</b>	<b>(\$424,646)</b>	<b>\$3,821,811</b>		
School System’s energy costs per square foot for electricity and natural gas	\$1.92	\$1.92	\$1.92	\$1.92
Estimated outsourced energy cost per square foot	\$1.60	\$1.35	\$1.63	\$1.54
Estimated savings per square foot	\$0.32	\$0.57	\$0.29	\$0.38
Gross Square Footage *	14,154,857	14,154,857	14,154,857	14,154,857
<b>Estimated annual savings for energy management</b>	<b>\$4,529,554</b>	<b>\$8,068,268</b>	<b>\$4,104,909</b>	<b>\$5,378,846</b>

Source: Confidential Maintenance Feasibility Studies provided by two national facilities outsource providers at McConnell Jones Lanier & Murphy LLP’s request, July 2014.

**Exhibit 6-45** shows that the School System has an opportunity to potentially realize annual savings of up to as much as \$3,900,000 by outsourcing its maintenance operations, and \$2,400,000 to \$8,300,000 by outsourcing its energy management program through a competitive request for proposals process. Although the range of projected annual savings is significant, one provider noted, that due to the complexity of the Facility & Grounds Maintenance Department—because of its size and scale—numerous factors would impact the financial considerations of proposals submitted by potential vendors. These factors will include decisions related to staffing and personnel, energy and utility costs, and allocated or non-allocated costs—such as general liability insurance and Workers’ Compensation, employment costs (uniforms, background checks, and training), technology (hand-held devices, computers, and telephones), Human Resources and Finance Department support. In any event, the projected annual savings would likely fall within this range once the School System undertakes a competitive solicitation process.

The School System should proceed with a competitive request for proposal process to outsource its maintenance department and energy management program to a national facility management outsource provider for 2015-2016.

#### **FISCAL IMPACT**

The midpoint of Provider A’s projected annual savings estimate for outsourced maintenance management is \$1,698,582 [(-\$424,646 + \$3,821,811) ÷ 2]. Accordingly, the conservative approach to estimating the potential annual cost savings to the School System for outsourced maintenance management is to use the midpoint, which yields a projected annual savings of \$1,698,582 beginning in 2016-2017.

The midpoint of Provider A’s projected annual savings estimate for an outsourced energy management program is \$6,298,911 [(\$4,529,554 + \$8,068,268) ÷ 2], while the midpoint of Provider B’s projected annual savings estimate is \$4,741,878 [(\$4,104,909 + \$5,378,846) ÷ 2]. Accordingly, the conservative approach to estimating the potential annual cost-savings to the School System for an outsourced energy management program is to average both midpoints, which yields a projected annual savings of \$5,520,395 [(\$6,298,911 + \$4,741,878) ÷ 2] beginning in 2016-2017.

The total potential annual cost savings opportunity from outsourcing the School System’s maintenance and energy management programs, beginning 2016-2017, is summarized as follows:

Projected annual savings from outsourcing maintenance	\$1,698,582
Projected annual savings from outsourcing energy management	\$5,520,395
Total projected annual savings from outsourcing opportunities	\$7,218,977

**FISCAL IMPACT SUMMARY**

	RECOMMENDATION	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 6: FACILITIES MANAGEMENT</b>								
<b>6-A.1</b>	Complete the planning components necessary to implement a fully-integrated 10-year Facilities Master Plan that addresses systemwide needs.	\$0	\$0	\$0	\$0	\$0	\$0	\$(200,000)
<b>6-B.1</b>	Develop and implement a process to conduct post-occupancy evaluations of major construction projects.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>6-C.1</b>	Optimize school facility utilization in all clusters as a component of the facility master planning process.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>6-D.1</b>	Develop an allocation model to determine the appropriate staffing levels for the Facility & Grounds Maintenance Department to enhance productivity levels in the most efficient, cost-effective manner.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>6-E.1</b>	Expand the geographic zone approach for deployment of trade staff for routine, preventative, and emergency maintenance needs.	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**FISCAL IMPACT SUMMARY (Cont'd)**

	RECOMMENDATION	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
6-F.1	Provide extensive training on the management reporting and analytical capabilities of the SchoolDude Maintenance Direct work order management system.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6-G.1	Enhance the School System's preventative maintenance program by developing and implementing a formal, documented preventative and predictive program containing regularly scheduled maintenance and repair activities.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6-H.1	Develop and maintain a deferred maintenance plan.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6-I.1	Perform a training needs assessment and develop an annual training plan to improve the overall skills and efficiency of Facility & Grounds Maintenance staff.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6-J.1	Hire an in-house energy manager to provide a central point of oversight and accountability to control energy costs.	\$(91,196)	\$(91,196)	\$(91,196)	\$(91,196)	\$(91,196)	\$(455,980)	\$0

**FISCAL IMPACT SUMMARY (Cont'd)**

	RECOMMENDATION	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
6-J.2	Develop and implement a comprehensive energy management program.	\$0	\$973,818	\$973,818	\$973,818	\$973,818	\$3,895,272	\$0
<b>TOTALS - CHAPTER 6 WITH IMPLEMENTATION OF REVIEW TEAM RECOMMENDATIONS</b>		<b>\$(91,196)</b>	<b>\$882,622</b>	<b>\$882,622</b>	<b>\$882,622</b>	<b>\$882,622</b>	<b>\$3,439,292</b>	<b>\$(200,000)</b>
<b>CHAPTER 6 OUTSOURCING IN YEAR TWO* – Proceed with a competitive request for proposal process to outsource its maintenance department and energy management program to a national facility management outsource provider for 2015-2016.</b>		<b>\$(91,196)</b>	<b>\$7,218,977</b>	<b>\$7,218,977</b>	<b>\$7,218,977</b>	<b>\$7,218,977</b>	<b>\$28,784,712</b>	<b>\$(200,000)</b>

## Management Response

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
Management of Metropolitan Nashville Public Schools should:			
6-A.1	Complete the planning components necessary to implement a fully-integrated 10-year Facilities Master Plan that addresses system-wide needs.	<p><b>Accept</b></p> <p>Facility Planning and Construction will work to develop and execute the missing components necessary to complete the 10-Year Facilities Master Plan. A major requirement is to include a community engagement plan in the process. The Communications Office is currently developing a complete communication engagement process with input from the Board.</p> <p>The existing process for interaction with the district's Leadership and Learning Division will continue to be refined to capture future educational and program changes through revisions to the MNPS Educational Specifications. These changes will be reflected in the Facility Standard Space Guide and Design Guidelines.</p> <p>MNPS will also combine all aspects of the current and expanded evaluation and planning activities into a formal 10-year Master Plan Document. This document will include metrics to evaluate effectiveness of the plan and establish procedures for modifications required by receiving capital funding on a single year basis.</p> <p>As recommended, MNPS will seek to work with an educational planning consultant to assist in-house teams in developing the master plan. Funding for this effort is requested in the current Capital Improvement Budget.</p>	January 2016
6-B.1	Develop and implement a process to conduct post-occupancy evaluations of major construction projects.	<p><b>Accept</b></p> <p>Facility Planning and Construction is revising an existing post-occupancy evaluation form. The revised form will be deployed January 2015 for projects completed during the 2014-2015 school year. The evaluation forms will be provided to district administrative personnel, executive lead principals, principals,</p>	January 2015

## Management Response

FACILITIES MANAGEMENT

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		teachers, parents and community members, along with staff from Facility and Grounds Maintenance, custodians, Safety and Security and Technology.	
6-C.1	Optimize school facility utilization in all clusters as a component of the facility master planning process.	<b>Partially Accept</b> MNPS agrees in principle with the fiscal benefits of optimal facility utilization and strives to reach this goal where it is practical. However, the district considers facility use along with many other factors when determining the best way to serve the educational needs of all students. Recent and continuing spikes in Metro Nashville's population growth, as well as the expansion of the charter school initiative, have spurred significant student population shifts at a pace that has exceeded Metro Nashville's annual budgeting and related land-use and construction processes.	Ongoing
6-D.1	Develop an allocation model to determine the appropriate staffing levels for the Facility & Grounds Maintenance Department to enhance productivity levels in the most efficient, cost-effective manner.	<b>Accept</b> The MNPS Facility & Grounds Maintenance Department's staffing levels for maintenance/repairs are currently less than other organization recommendations, including the Florida Department of Education (Florida Center for Community Design & Research) referenced in the final performance audit report. MNPS will continue to monitor and compare with similar organizations.	April 2015
6-E.1	Expand the geographic zone approach for deployment of trade staff for routine, preventative, and emergency maintenance needs.	<b>Accept</b> Several Facility & Grounds Maintenance Department shops are already dispatched following a zone concept. MNPS will continue to expand the zone dispatch to all shops applicable to a zone concept to maximize efficiencies.	April 2015
6-F.1	Provide extensive training on the management reporting and analytical capabilities of the SchoolDude Maintenance Direct work order management system.	<b>Accept</b> MNPS has completed an extensive discussion with the manufacturer of the School Dude system concerning the available management reports. MNPS will continue to utilize SchoolDude data to improve the efficiency and effectiveness of the Facility &	April 2015

## Management Response

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		Grounds Maintenance Department. Not all of the noted management reports are useful to the MNPS maintenance operations, but use of additional management reports will be expanded to identify work order and work management trends.	
6-G.1	Enhance the School System's preventative maintenance program by developing and implementing a formal, documented preventative and predictive program containing regularly scheduled maintenance and repair activities	<b>Accept</b> MNPS will develop and implement a documented preventative maintenance program for HVAC, plumbing, electrical, electronics and carpentry work centers.	Pilot HVAC PM implemented December 2014; All schools HVAC – October 2015
6-H.1	Develop and maintain a deferred maintenance plan.	<b>Accept</b> A deferred maintenance plan is in use as a worksheet of the Capital Improvement Budget process, but a formal deferred maintenance plan will be developed. The district has requested funding to outsource the development of a detailed Facility Condition Report. This detailed report will enhance the current process and provide additional documentation and justification for requests.	April 2015
6-I.1	Perform a training needs assessment and develop an annual training plan to improve the overall skills and efficiency of Facility & Grounds Maintenance staff.	<b>Accept</b> A comprehensive annual training plan will be developed by the Facility & Grounds Maintenance Department ensuring enhancement of safety practices, use of technology, and technical skill continuing education.	February 2015
6-J.1	Hire an in-house energy manager to provide a central point of oversight and accountability to control energy costs.	<b>Accept</b> The Facility & Grounds Maintenance Department will request funding and hire an in-house energy manager for oversight and accountability of energy costs.	September 2015
6-J.2	Develop and implement a comprehensive energy management program.	<b>Accept</b> The Facility & Grounds Maintenance Department will develop and implement a comprehensive energy management program and energy conservation plan.	April 2016

## Management Response

Chapter 6 - Alternative Sourcing Recommendation (page 6-68).		
<p>Proceed with a competitive request for proposal process to outsource the maintenance department and energy management program to a national facility management outsource provider for 2015-2016.</p>	<p><b>Reject</b>            Existing staffing levels are less than the recommended levels by all maintenance standards. Current MNPS maintenance staffing is 1 FTE for 90,000 square feet. Florida Center for Community Design &amp; Research recommends 1 FTE for 45,000 square feet as referenced in the performance audit report. MNPS disagrees with the performance audit calculations for staffing and potential cost savings. Exhibit 6-44 and 6-45 references the Association of Higher Education. Association of Higher Education is a higher education association and recommended staffing levels are not comparable to required staffing for K-12 educational districts. MNPS will continue to monitor staffing levels and identify benchmark standards for comparable school districts to determine future staffing needs.</p> <p>MNPS rejects the recommendation to outsource the energy management program, but the school district plans to request funding to hire an MNPS energy manager for FY2015-2016. The MNPS energy manager will be responsible for development and implementation of a comprehensive energy management program that includes a written energy conservation plan. This corrective action plan aligns with Recommendation 6-J.2.</p>	<p>N/A</p>

## CHAPTER 7 – NUTRITION SERVICES

### BACKGROUND

School district food service operations, also known as Child Nutrition Services, must comply with a variety of federal and state regulations and local board policy. The United States Congress directed the National School Lunch Program in 1946 to “safeguard the health and well-being of the nation’s children and to encourage the domestic consumption of nutritional agricultural products.”

The United States Department of Agriculture administers the National School Lunch Program and School Breakfast Program. School districts that participate in the National School Lunch Program and School Breakfast Program must serve students meals that meet federal guidelines for nutritional value and offer free and reduced-price meals to eligible students. When districts participate in the National School Lunch Program and School Breakfast Program, they receive cash subsidies and donated commodities from the United States Department of Agriculture for each eligible meal served at schools.

Government has recognized that schools have become the primary source of obtaining healthy meals for most children and has worked to enact many regulations to ensure that meals served to school children contain a healthy variety of fruits, vegetables, and whole grains, while also balancing the amount of proteins, saturated fats, sodium, and calories. The most recent regulation enacted that has a significant impact on the way school districts operate their food service program is the Healthy, Hunger-Free Kids Act of 2010. This act requires schools to improve nutritional standards for each meal served. There are specific and rigid guidelines that must be implemented, which include dietary guidelines and pricing requirements. For example, school lunches should include daily fruit and vegetable offerings, more whole grains, only fat-free or low-fat milk, and reduced saturated fat, trans fat, and sodium.

### CHAPTER HIGHLIGHTS

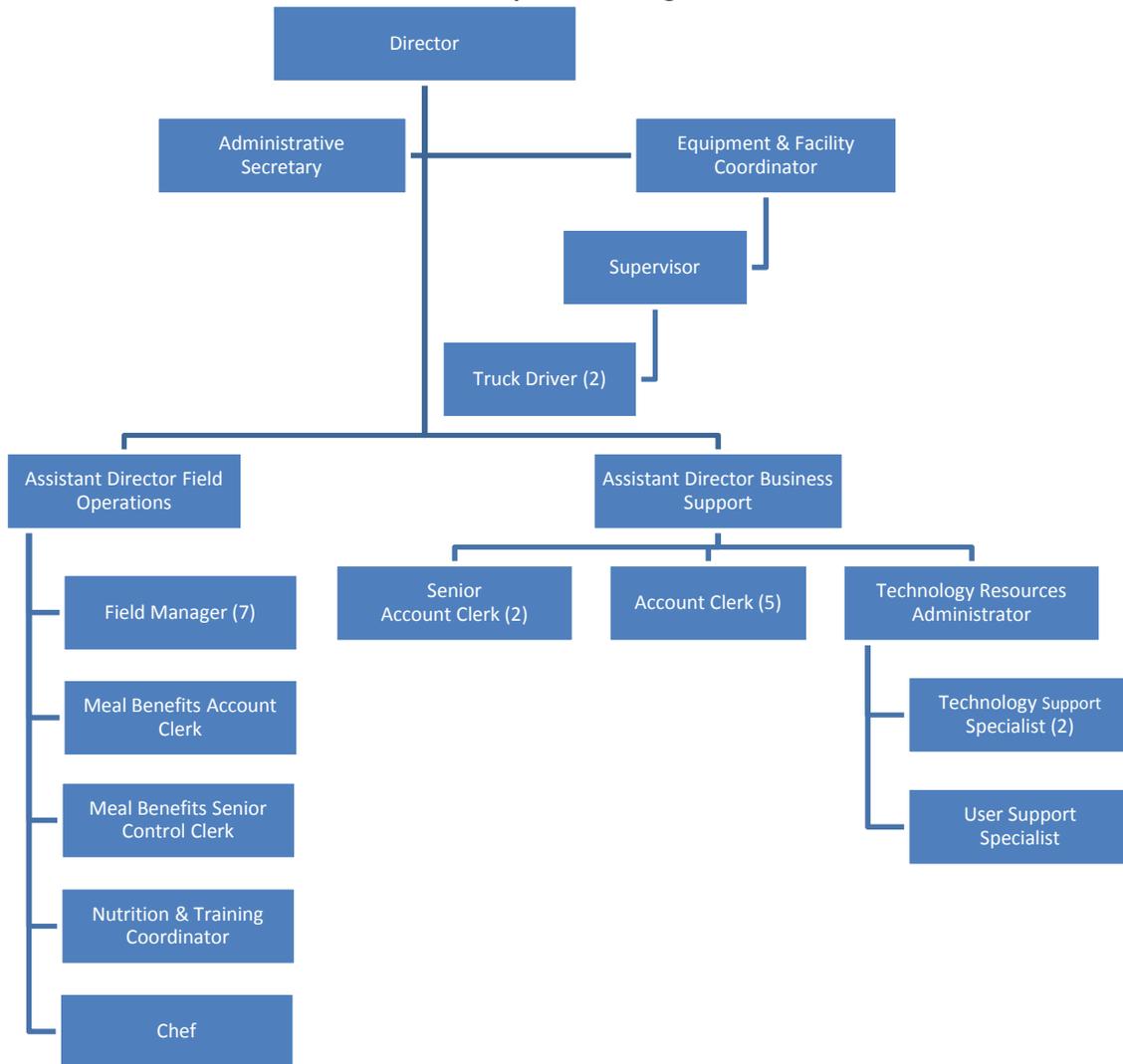
- With a fund balance of \$14,353,514, or 38 percent of annual operating expenditures, the Nutrition Services Department has sufficient fund reserves for continued self-sustained operations.
- The School System's food costs, as a percentage of total revenue, are well below peer districts.
- The director of Nutrition Services and nutrition education and training coordinator have worked in cooperation with local advocacy groups, such as the Alignment Nashville Nutrition Committee, to serve healthier and more nutritious meals in the School System.
- Nutrition Services does not have a formalized planning process to guide program direction and operational decisions and should develop and implement Nutrition Services operating and financial plans including a marketing plan.
- Nutrition Services does not have a capital replacement plan and therefore should develop and implement a long-term facilities and equipment plan.
- Nutrition Services' current payroll costs are 52 percent of revenues and therefore should reduce payroll costs by 10 percentage points of 2012-2013 departmental total payroll expenses over the next five years. By reducing labor costs, Nutrition Services has an opportunity to achieve \$389,593 per year in annual cost savings, beginning in 2015-2016.
- Estimates from a national food service outsource provider suggest that the School System could potentially save an average of \$2,141,467 annually, beginning in 2016-2017, if food service operations were outsourced.

The challenge that schools face in meeting the Healthy, Hunger-Free Kids Act of 2010 is in preparing foods that taste good and are similar to what children are accustomed to eating, while also adhering to the guidelines. Students in all school districts have noticed the differences resulting from the revised dietary guidelines and have voiced complaints that the food does not taste good and that they are still hungry due to smaller portion sizes.

Effective Child Nutrition Services operations provide students and staff with appealing and nutritious breakfasts and lunches at a reasonable cost in an environment that is safe, clean, and accessible. The goal of each Child Nutrition Services is to be self-supporting such that revenue generated from meals served cover all operational and staffing costs with no assistance needed from the School System's General Fund.

Metropolitan Nashville Public Schools (the School System) Nutrition Services Department serves breakfast and lunch meals to more than 82,000 students. In 2012-2013, the program served over 4,200,000 breakfasts and almost 8,400,000 lunches to students at these schools. Approximately 75 percent of students enrolled in the schools are eligible to receive free and reduced-priced breakfast and lunch meals through federal reimbursements from the United States Department of Agriculture Child Nutrition Program. The program operates under the leadership of the director of Nutrition Services who is supported by an assistant director of Field Support, an assistant director of Business Support, a chef, a nutrition education and training coordinator, a technology and network coordinator and seven field managers. **Exhibit 7-1** presents the Nutrition Services organization chart for central office administration and staff support positions. Most Nutrition Services employees consist of cafeteria managers and kitchen staff who work in 139 school cafeterias.

**Exhibit 7-1**  
**Nutrition Services Department Organization Chart**



Source: Metropolitan Nashville Public Schools Child Nutrition Services, January 2014.

In 2012-2013, Nutrition Services generated \$39,570,676 in revenue and had a fund balance of \$14,353,514 at the end of the 2012-2013 school year. **Exhibit 7-2** presents a summary of the School System's revenue and expenditures for the past four years.

**Exhibit 7-2**  
**Nutrition Services Department Revenues and Expenses**  
**2010-2011 through 2012-2013**

Category	2010-2011 Actual	2010-2011 Percentage of Actual Revenue	2011-2012 Actual	2011-2012 Percentage of Actual Revenue	2012-2013 Actual	2012-2013 Percentage of Actual Revenue
Local Revenue	\$6,673,744	19%	\$6,656,911	18%	\$6,528,564	16%
State revenue	\$319,394	1%	\$341,234	1%	\$347,962	1%
Federal Revenue	\$26,048,909	75%	\$28,239,340	77%	\$30,171,279	76%
Miscellaneous Revenue	\$65,853	0%	\$108,019	0%	\$670,284	2%
USDA Commodities	\$1,744,247	5%	\$1,525,043	4%	\$1,852,587	5%
<b>Total Revenue</b>	<b>\$34,852,147</b>	<b>100%</b>	<b>\$36,870,547</b>	<b>100%</b>	<b>\$39,570,676</b>	<b>100%</b>
<b>Total Expenses</b>	<b>\$34,052,438</b>	<b>98%</b>	<b>\$35,027,788</b>	<b>95%</b>	<b>\$37,815,803</b>	<b>96%</b>
<b>Net Profit (Loss)</b>	<b>\$799,709</b>	<b>2%</b>	<b>\$1,842,759</b>	<b>5%</b>	<b>\$1,754,873</b>	<b>4%</b>
<b>Fund Balance *</b>	<b>\$10,755,882</b>		<b>\$12,598,641</b>		<b>\$14,353,514</b>	

Source: Nutrition Services, Financial Summary through the Years, January 2014.

\*Determined from Metropolitan Nashville Public Schools 2013-2014 Budget Book Nutrition Services page 118.

## BEST PRACTICES

The food service industry has many organizations that identify best practices for food service operations to help guide an organization to profitability, operational efficiencies and sound management practices. McConnell Jones Lanier & Murphy LLP (or the review team) identified eight of these best practices that were applicable to the School System’s Nutrition Services’ operations to determine if best practices were being met. The School System meets three of the best practices while the other five were not met indicating where there are opportunities for improvement. This report discusses these opportunities in the detailed observations. **Exhibit 7-3** provides the summary of food service best practices and indicates whether Nutrition Services has met them.

**Exhibit 7-3**  
**Summary of Best Practices – Comparison of Nutrition Services**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
1.	Short-term and long-term plans have been developed and implemented to guide management decision making in district food service operations.		X	There is a lack of formalized planning to guide management decision-making in the School System’s food service operations. <b>See Observation 7-A.</b>
2.	The program is in a financially stable position with a sufficient fund balance to handle unanticipated contingencies.	X		
3.	The facilities and equipment in district kitchens and dining areas are in good condition.		X	Kitchen equipment and dining areas in a number of schools need repairs, replacements, upgrades, and/or renovations. <b>See Observation 7-B.</b>
4.	Food costs, as a percentage of revenue, are at appropriate levels when compared with surveyed peer districts.	X		
5.	Labor costs, as a percentage of revenue, are at appropriate levels when compared with surveyed peer districts.		X	Labor costs are higher than all surveyed peer districts. <b>See Observation 7-C.</b>
6.	Healthy and nutritious meals are being served to students in accordance with Child Nutrition Program guidelines.	X		
7.	The program is achieving high student breakfast and lunch participation when compared with surveyed peer districts.		X	The program is not achieving its potential for student meal participation, given the level of free lunch eligibility among students enrolled in the School System. <b>See Observation 7-D.</b>

**Exhibit 7-3**  
**Summary of Best Practices – Comparison of Nutrition Services (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
8.	Campus food service operations receive sufficient support, supervision, and guidance from the program's central office staff.		X	The field manager and chef positions could be more optimally used in campus food service operations. <b>See Observation 7-E.</b>

Source: McConnell Jones Lanier & Murphy LLP Review Team.

## ACCOMPLISHMENTS

### ACCOMPLISHMENT 7-A

#### The School System’s Child Nutrition Program is in a financially sound position.

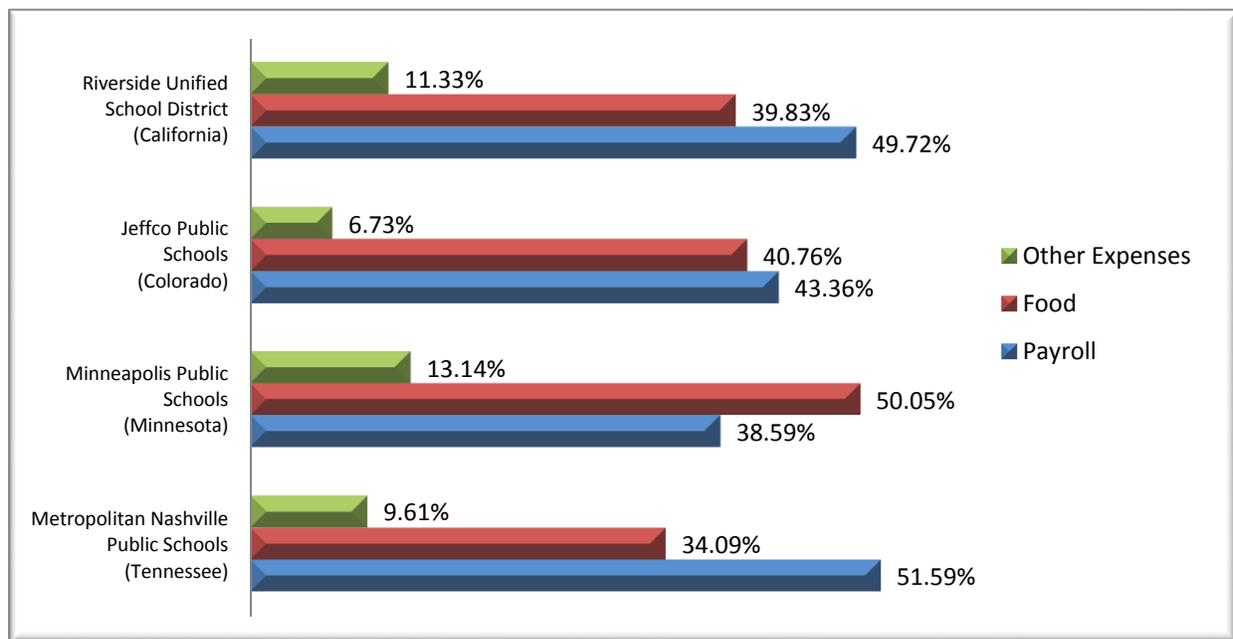
Best practices suggest that school food service programs maintain a reserve fund balance equal to 25 percent of their annual operating expenditures to handle unanticipated contingencies. As illustrated in **Exhibit 7-2**, Nutrition Services had a 2012-2013 ending fund balance of \$14,353,514, or 38 percent of annual operating expenditures. As a result, the department has sufficient fund reserves for continued self-sustained operations without relying on support from the School System’s General Fund. Much of the credit for this solid financial position of can be attributed to the financial diligence of the assistant director of Business Support.

### ACCOMPLISHMENT 7-B

#### The School System’s food costs, as a percentage of total revenue, are well below peer districts.

**Exhibit 7-4** presents a 2012-2013 comparison of the three primary school food service costs (payroll, food, and other) between the School System’s Nutrition Services Department and three peer districts. As illustrated, the School System’s 34 percent food cost was much lower than surveyed peer districts. This indicates that effective food cost control systems have been implemented into campus food service operations.

**Exhibit 7-4**  
**Primary Cost Categories as a Percentage of Revenue**  
**Nutrition Services Department and Peer Districts 2012-2013**



Source: Nutrition Services, Financial Summary through the Years Report, April 2014.

**ACCOMPLISHMENT 7-C**

**Nutrition Services has successfully introduced the breakfast in the classroom program to some elementary schools and has received federal grants to participate in additional programs to increase student participation and departmental revenue.**

Tusculum Elementary, one of the elementary schools that participates in the breakfast in the classroom program, received a \$3,000 award from Purity Dairies and the Southeast Dairy Association in the “Titans of Taste” milk contest for increased breakfast participation during the month of October 2013. The increase in participation from approximately 250 to 600 breakfasts per day occurred following the introduction of the breakfast in the classroom program at that school. Nutrition Services also received grants to participate in the Fresh Fruit and Vegetable Program and initiated the After School Enrichment, Snack, and Summer Camp programs at a number of schools. These programs have enabled the School System to provide additional food offerings to students while also increasing revenue.

**ACCOMPLISHMENT 7-D**

**Nutrition Services created a chef position to work with the nutrition education and training coordinator in developing healthy and nutritious recipes and menus that meet federal nutrition requirements.**

As a result, the program has received a number of best practices awards in the past three years, including second place in the Produce Culinary Competition from the Tennessee State Department of Nutrition, the USDA best practices award for “Translating the Menu to Achieve Healthier Food Choices,” and two Silver awards for the “Know Your Nutrient” curriculum and the “Nutrition Awareness” newsletter for creating a healthier school environment. In the summer 2011, the Nutrition Walk that was developed by the nutrition education and training coordinator was recognized as one of the 13 best practices in the country by the National School Nutrition Association. In 2011-2012, two of the School System’s campuses received the Healthier Challenge Gold Award, five campuses received a Silver Award, and 38 campuses received a Bronze Award for their nutritional and physical activities and creating a culture of wellness.

**ACCOMPLISHMENT 7-E**

**The director of Nutrition Services and nutrition education and training coordinator have worked in cooperation with local advocacy groups, such as the Alignment Nashville Nutrition Committee, to serve healthier and more nutritious meals in the School System.**

Some of the resulting initiatives include a discontinuation of fried foods on school menus and the replacement of deep frying equipment with convection ovens in School System kitchens. There has also been a conversion to healthier a la carte snack items and collaboration with a local milk producer to modify their chocolate milk formula to decrease sugar content.

## DETAILED OBSERVATIONS

### **PERFORMANCE PLANNING**

#### **OBSERVATION 7-A**

**Nutrition Services does not have a formalized planning process to guide program direction and operational decisions.**

The absence of a formalized planning process results in a lack of strategic direction and limits opportunities for program improvement and innovation. More specifically, the review team observed the following, which would be considered in a comprehensive, formal planning effort:

- Documented operating or financial plans have not been developed to ensure uniform direction. This situation results in a lack of clear program goals, objectives, and performance expectations.
- Although the School System provides data to the Council of Great City Schools and receives their key performance indicator reports and uses the metrics to benchmark their operations, a sufficient comparative analysis has not been regularly performed and documented of peer districts and the hospitality industry for use in program benchmarking, best practices, or innovative activities to improve program operational efficiencies and effectiveness.
- Clear performance expectations and standards have not been fully implemented into campus foodservice operations. Although Nutrition Services generates detailed monthly financial recap reports by campus, the content, format, and length of these reports could be summarized, simplified, and limited to several key performance indicators (i.e., food costs, labor costs, productivity, participation) for more effective implementation into campus food service operations. It is important that field managers and cafeteria managers understand the content of these reports and how to use this information for decision-making on an ongoing and timely basis to improve the efficiency and effectiveness of food service operations.
- No marketing plan exists to guide improvements in cafeteria food quality, staff service, or the dining area environment. There also are opportunities to expand existing menu options and services to School System students (i.e., breakfast in the classroom, the School System's charter schools, a la carte item options, etc.), along with other new and innovative programs used in peer districts surveyed (grab and go breakfasts, Summer Food Service Program, Farm to School, salad bars, etc.). There also may be opportunities to expand the Nutritional Services program revenues from other non-traditional sources. For example, the school system in Riverside, California services the local Meals on Wheels program and 20 other for-profits, nonprofits, and small private schools.
- There is no initiative in the department to document and promote positive accomplishments, innovative practices, or successful initiatives, similar to those noted and discussed in the accomplishments section of this chapter. This positive information could enhance the image and reputation of the Nutrition Services Department among all of its stakeholders.

The aforementioned observations were consistent with findings from the 2010 Council of Great City Schools program review that noted that the department “lacks an organizational vision and direction.” The report also noted a “pervasive lack of planning,” as evidenced by no “strategic plan, business plan, or marketing plan.” Similar to the review team’s observations, the 2010 Council of Great City Schools review also noted that there were “no performance standards for school-site operations relating to profitability, participation, or food quality,” and that “the department does not appear to be proactive in promoting its positive accomplishments.”

### **RECOMMENDATION 7-A.1**

#### **Develop and implement Nutrition Services Department operating and financial plans.**

The Nutrition Services Department should create an operating plan that specifies the program’s approach to providing healthy and nutritious meals to students in an efficient and cost effective manner. The plan should be aligned with the School System’s strategic plan, where applicable, to ensure that the department supports the School Board’s broader systemwide goals and objectives. The plan should serve as a framework to guide short- and long-term decision-making and ensure that School System food service operations are managed efficiently and effectively. Key elements of the operating plan should include, but not be limited to:

- identification of key program stakeholders and their desires, needs, and preferences;
- mission statement;
- goals and objectives that are quantifiable so efficiency and effectiveness can be measured, monitored and reported;
- strategies with detailed action plans to implement program goals and objectives that can be monitored and reported; and
- reporting of plan results and tactics to resolve any unfavorable deviations from plan or to make appropriate adjustments to the plan.

The financial plan should project revenue and expenses for the next three to five years. It should include assumptions regarding changes such as shifts in the demographics of the student population or needed major equipment purchases and facility renovations. This approach also helps to ensure an adequate program fund balance. Since federal regulations prohibit school districts from accumulating a fund balance in excess of three months average operating expenses without a planned use of the surplus, a documented financial plan would clarify the planned use of a program surplus.

The following positions should be involved in the development and implementation of the Nutrition Services operating and financial plans.

- director of Nutrition Services;
- assistant director, Field Support;
- assistant director, Business Support;
- chef;

- nutrition education and training coordinator;
- equipment and facilities coordinator; and
- field managers.

## **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

## **RECOMMENDATION 7-A.2**

### **Integrate performance standards into campus food service operations.**

An effective performance measurement system will measure Nutrition Services program results and compare them with benchmarked standards. The director of Nutrition Services could present periodic program reports to the director of schools and school board to identify the need for corrective action to address such concerns as high labor costs, low employee productivity, high food costs, and/or low student participation and satisfaction.

The director of Nutrition Services, assistant director of Field Support, and assistant director of Business Support should document performance and efficiency standards and implement them into all School System food service operations. A simplified variance analysis could then be implemented by campus that compares several key performance targets with actual results to improve operating efficiencies in food service operations. Examples of commonly used food service program performance and efficiency measures on both a campus and systemwide basis, most of which are currently being tracked and reported by Nutrition Services, include:

- food costs;
- payroll costs;
- employee productivity (Meals Per Labor Hour);
- student meal participation (breakfast, lunch, and free, reduced, and paid); and
- net income/loss.

It is important that these reports be provided to field managers and cafeteria managers on a timely basis, as concerns were expressed in comments from cafeteria managers that they do not receive their profit and loss statements until two months after they submit the information. As a result, field managers and cafeteria managers are not able to respond in a timely manner to correct unfavorable variances from performance targets.

For effective implementation into campus food service operations, the director of Nutrition Services, assistant director of Field Support, and assistant director of Business Support should conduct training sessions with all field managers and cafeteria managers so they better understand how to interpret and use the information provided in campus-based operations and financial reports. The field managers should continue this hands-on training with the cafeteria managers in their assigned schools to make

sure they understand the monthly variance analysis and what steps to take to correct unfavorable variances in their respective locations in a timely manner.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

#### **RECOMMENDATION 7-A.3**

##### **Develop and implement a Nutrition Services marketing plan.**

The marketing plan should identify initiatives for improvements in cafeteria food quality, menu offerings, staff service, serving lines, facilities/equipment, and dining environment. This idea includes the expansion of existing successful programs (i.e., breakfast-in-the-classroom, fruit/vegetable and snack programs, and supper programs) and new, innovative initiatives such as a la carte menu options and branding for salad bars.

Sources of additional program external revenues also should be identified and plans should be established to pursue these opportunities (i.e., charter schools, summer feeding, and community outreach programs). The implementation of this plan should result in improved student satisfaction ratings and increased breakfast and lunch meal participation.

The following positions should be involved in the development and implementation of the marketing plan.

- director of Nutrition Services;
- assistant director, Field Support;
- chef;
- nutrition education and training coordinator;
- field managers (7);
- kitchen managers and staff; and
- students.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

#### **RECOMMENDATION 7-A.4**

##### **Generate annual reports that document the Nutrition Services accomplishments, innovative practices, and successful initiatives.**

Annual reports could document Nutrition Services accomplishments, innovative practices, or successful initiatives. Examples of these accomplishments are included in the accomplishments section of this

chapter. The positive information provided in an annual report could enhance the image and reputation of Nutrition Services among all stakeholders.

The following positions should be involved in the development of the Nutrition Services annual reports.

- director of Nutrition Services;
- assistant director, Field Support;
- assistant director, Business Support;
- chef; and
- nutrition and education and training coordinator.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

### **EQUIPMENT AND FACILITIES**

#### **OBSERVATION 7-B**

##### **Nutrition Services does not have a capital replacement plan.**

This situation is consistent with findings from the 2010 Council of Great City Schools review that noted that there was “no cafeteria equipment replacement plan to ensure that employees have the tools to perform their jobs efficiently,” and there was “no capital improvement plan to ensure that school cafeterias are updated and renewed on a periodic basis. “Following visits to school sites and a review of kitchen staff survey comments, the review team noted the following concerns related to kitchen equipment and dining area facilities at district schools:

- **Inoperable kitchen equipment.** There is inoperable equipment needing repair or replacement in some kitchens. These conditions were supported by the review team’s surveys of cafeteria managers and kitchen staff. The lowest rated items on these surveys were related to the condition of the facilities and equipment at the schools. Only 58 percent of managers indicated that their kitchen facilities were in good condition, while only 56 percent reported that their kitchen equipment was in good working condition. At one school, an employee reported that their kitchen “equipment breaks down every other week.” This included the oven vent hood that was not working at the time. One employee stated that their school was in “dire need of an updated kitchen,” while another stated, “our equipment needs to be updated.”
- **Shortage of supplies.** Some kitchen employees reported that they were short on kitchen supplies, such as utensils, tongs, pizza cutters, and spatulas. These comments were consistent with the finding from the 2010 Council of Great City Schools review that “appropriate small equipment and utensils were not always available to prepare proper sized portions.”

- **Poor facility conditions.** Some dining and kitchen physical facilities are in poor condition and have significant dining area capacity constraints, based on student enrollment. These locations included Tusculum Elementary, Haywood Elementary, McMurray Middle School, and Martin Luther King High School. For example, at Haywood Elementary, the lunch period begins at 9:30 am with continuous service for four hours to adequately serve the students enrolled at that location, due to a significantly undersized dining area and kitchen. At Haywood Elementary, students were unable to eat in the frigid dining area because of problems with the school heating system. Employees at some schools reported poor working conditions in some locations that included an inoperable hot water heater, ceiling leaks, broken bathroom tiles, a heating system that did not work in the dining area, paint peeling off the walls, and mold in the air. It was indicated that some of these conditions had not been addressed in the entire school year. The 2010 Council of Great City Schools review reported similar observations at school kitchens, such as “ceilings above serving lines needing repair, rusty floor drains, and cracked concrete floors.”
- **Inadequate space.** Some employees commented that “space is tight,” “we need more space,” and there is “not enough space for us to perform our jobs sufficiently.” Several employees stated that they also needed more storage space. Some of the issue is excessive inventory of frozen food commodity items that we observed in some kitchens, with some of these cases of food often stored on the floors of walk-in freezers, due to lack of sufficient shelving. These observations also were noted in the 2010 Council of Great City Schools review.
- **Unused kitchen equipment.** There is unused kitchen equipment and supplies being stored in school kitchen or dining areas although the School System has a central salvage facility. This same concern was raised in the 2010 Council of Great City Schools review and by cafeteria staff during this review.
- **Conversion to disposables.** Dish machines at many locations are no longer operated, as disposable trays and plastic utensils have replaced plastic trays and silverware. However, dish machines remain in all kitchens and some schools continue to use dish machines and plastic trays, although plastic utensils are used at all locations. An employee in one location suggested that their dish machine should be removed and replaced with an office that had employee lockers, because there was no place for staff to put their personal items (i.e., jackets, purses, etc.). We also understand that the recent conversion to green compostable trays has resulted in an additional \$76,000 per year in supply costs. However, these trays are not sturdy and since there is no district composting program, they are being thrown in the garbage. Further, the results of a 2011 study conducted by the School Nutrition Association revealed that “reusable compartment trays had a lower environmental impact and were less expensive when compared to disposable options.” The study also reported that since the newer model dish machines use less water and energy and can reduce rinse water use and energy consumption by nearly 50 percent, schools can save approximately \$1,300 per 100,000 meals served.
- **Lack of equipment uniformity.** There is a lack of uniformity of kitchen equipment (tilt skillets, combination ovens, etc.) across school sites. This condition presents challenges and inefficiencies to the nutrition services chef and nutrition education and training coordinator in menu planning, recipe development, food preparation procedures, and employee training.

- **Underutilized kitchens.** Nutrition Services is not effectively using their kitchen facilities and equipment at some locations. For example, some kitchens are so large that space and equipment is not used and some serving lines are closed. This situation is in contrast to other schools where dining and kitchen facilities and serving lines are undersized and there is insufficient equipment to serve student meal demand.
- **No fixed assets inventory.** A fixed assets inventory is not conducted for of all district kitchen equipment. This is consisted with a finding of the 2010 Council of Great City Schools review, which reported that “schools do not conduct an annual physical inventory of fund assets.” It is important that an inventory of all district fixed assets be conducted on an annual basis. This situation was also noted in the Financial Management chapter of this report.

### RECOMMENDATION 7-B.1

#### **Develop and approve a Nutrition Services long-term facilities and equipment plan.**

The department’s equipment and facilities coordinator should work with the School System’s facilities staff to develop a long-term plan for the facilities and equipment in all kitchen and dining areas for all existing and planned schools. The plan should establish priorities for facility and equipment upgrades, repairs, and replacements for a five-year projected timeframe. Although Nutrition Services may be able to implement planned kitchen equipment replacement, the implementation of the plan to repair and upgrade building facilities will be contingent on the School System’s capital improvement fund budget. Thus, the plan should be aligned with this budget. Key elements of the plan should include, but not be limited to:

- a current fixed asset inventory of kitchen and dining area equipment at all district schools. This task should include an assessment of the operating condition of all equipment along with the projected life before anticipated replacement;
- a prioritized approach to repair or replace inoperable kitchen or dining area equipment at all district schools;
- a plan to increase the uniformity of kitchen equipment across school sites as equipment is replaced or new equipment is added;
- an inventory of all equipment in kitchen or dining room areas that is no longer used or needed and a plan for removal sale through the Metropolitan Nashville Government’s E-bid system for surplus equipment;
- a prioritized approach with the School System’s Facilities staff to ensure the timely renovation and refurbishment of all school kitchen and dining facilities. This approach includes budgeting for improvements to kitchen facilities and the environmental atmosphere of school dining areas;
- a plan to more effectively use kitchen facilities and equipment at locations that are being underutilized. This plan could include the conversion of these locations into central food production and testing/training sites, as presented in **Recommendation 7-E.1**;
- a planned preventative maintenance program for kitchen equipment at all schools; and

- an inventory of the condition and utilization of dish machines at all schools and a plan to repair or replace inoperable dish machines. Since funds have already been used to purchase these machines, they should be used to reduce the need for more costly disposables, such as compostable trays, now being used at school kitchens. At some schools, the use of dish machines will likely require the purchase of more plastic trays and flat ware. There also will be an added cost for dish machine chemicals, water, and payroll. However, these additional costs should be offset by the decrease in the high cost of the disposables being used currently.

The following positions should be involved in the development of the long-term facilities and equipment plan.

- director of Nutrition Services;
- equipment and facilities coordinator;
- school system facilities and maintenance staff;
- assistant director, Field Support;
- chef; and
- field managers.

#### **FISCAL IMPACT**

The exact amount needed for kitchen equipment and supply replacement should be determined when the plan is developed. Kitchen equipment and supply replacement can be planned with existing resources from the department's equipment budget and current fund balance of \$14,353,514 as of 2012-2013. Fund balance reserves cannot be used for any other purpose.

Facility repairs and renovations must be aligned with the School System's capital improvement budget due to the level of effort involved in renovating kitchens and regulatory compliance with allowable expenditures. The implementation of these recommendations should be phased in, as additional funds become available. The National School Lunch Program expenditures is governed by many regulations. The following regulation clarifies allowable expenditures for maintenance, operations and repairs, including renovations:

- 2 Code of Federal Regulation Part 225, Appendix B, section 25, Maintenance, operations and repairs, identifies costs of normal repairs and alterations as allowable so long as they: (1) keep property in an efficient operating condition; (2) do not add to the permanent value of the property or appreciably prolong its intended life; and (3) are not otherwise included in rental costs or other charges for space. Based on these principles, Food & Nutrition Service has allowed limited renovations within the inside perimeter of a kitchen/cafeteria space with the required prior School Authority [State of Tennessee] approval; and
- For example, renovating a kitchen by cutting away a portion of the wall to allow room for a walk-in refrigerator and related electrical wiring would be an allowable expense if the renovation is necessary to accommodate increased participation of students in the School Management Program's. However, it would be an unallowable expense if renovation of the kitchen was purely an aesthetic matter.

## **LABOR COST**

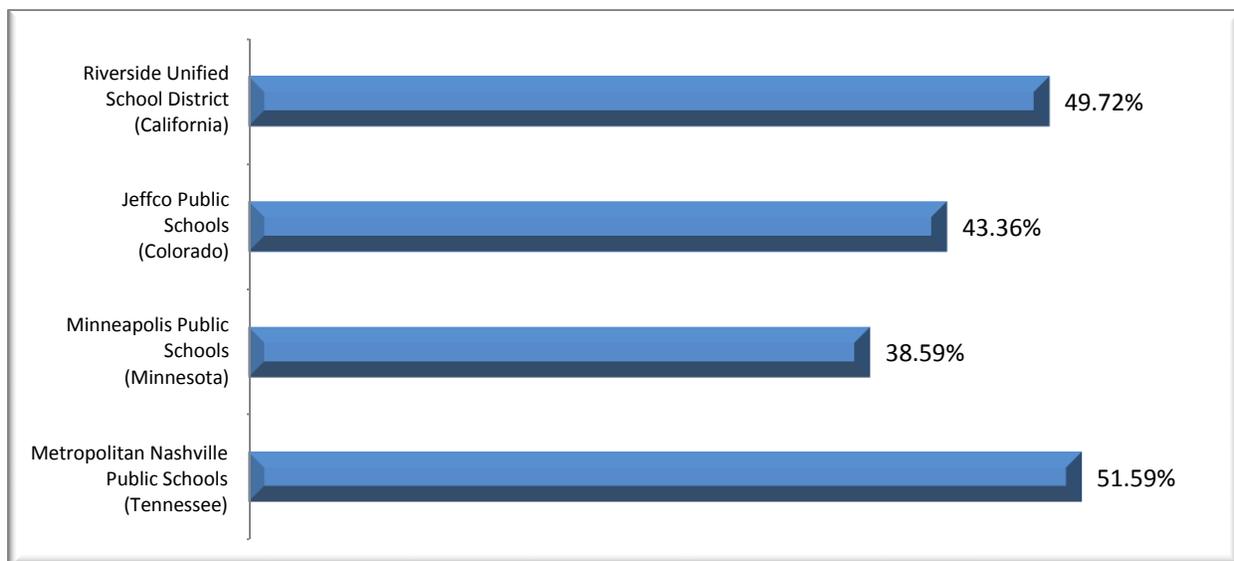
### **OBSERVATION 7-C**

**Nutrition Services payroll costs are higher than those in surveyed peer districts.**

**Exhibit 7-5** presents a comparison of 2012-2013 payroll costs, as a percentage of revenue, for the School System’s Nutrition Services and peer districts that responded to the peer survey. As illustrated, the percentage of the Nutrition Service Department’s 2012-2013 payroll costs to revenue of 51.59 percent was higher than the three peer districts. A more detailed analysis of a recent departmental recap report by campus revealed wide payroll cost percentage variations across schools with 29 schools reporting payroll costs that exceeded 60 percent of their respective cafeteria revenue. Ten of these schools reported payroll costs that exceeded 70 percent of revenue.

**Exhibit 7-5**

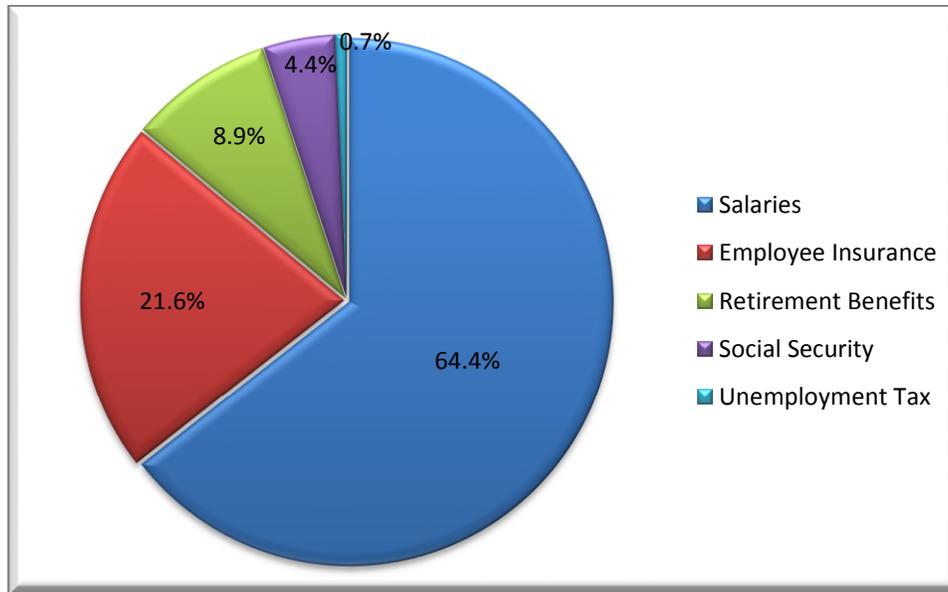
#### **Payroll Costs as Percentage of Total Revenue for the Nutrition Services Department and Peer Districts**



*Source: Nutrition Services, Financial Summary through the Years Report, April 2014 and Completed Peer District Surveys.*

**Exhibit 7-6** reveals that in 2012-2013, salary costs were 64.4 percent of total payroll costs. Employee insurance plus retirement benefits (including social security) were 34.9 percent of payroll costs. In total, salaries and benefits equate to 51.59 percent of the department’s cash revenue of \$37,718,089 for 2012-2103, as shown in **Exhibit 7-7**. These relatively high payroll cost percentages are partially the result of the employee benefits policies established by the Metropolitan Nashville Employee Benefits Board that requires any Nutrition Services employee who works 20 hours or more per week to receive a full benefits package. Thus, Nutrition Services administration has no control over these benefit costs that contribute to higher labor cost percentages compared to peer districts.

**Exhibit 7-6  
Nutrition Services Payroll Cost Composition 2012-2013**



Source: Nutrition Services, Financial Summary through the Years Report, April 2014.

**Exhibit 7-7** presents changes in the composition of the Nutrition Services Department's payroll costs for the past three years. As illustrated, the largest cost increases were in employee insurance and retirement benefits which are established by policies of the Metropolitan Nashville Employee Benefits Board and reflect benefit rates and employee eligibility requirements (i.e., average weekly hours scheduled) to receive these benefits. Between 2010-2011 and 2011-2012, the combination of employee insurance and retirement benefits increased almost 15 percent, compared to a revenue increase of 6.7 percent.

**Exhibit 7-7  
Percent Changes in Nutrition Services Payroll Costs from 2010-2011 to 2012-2013**

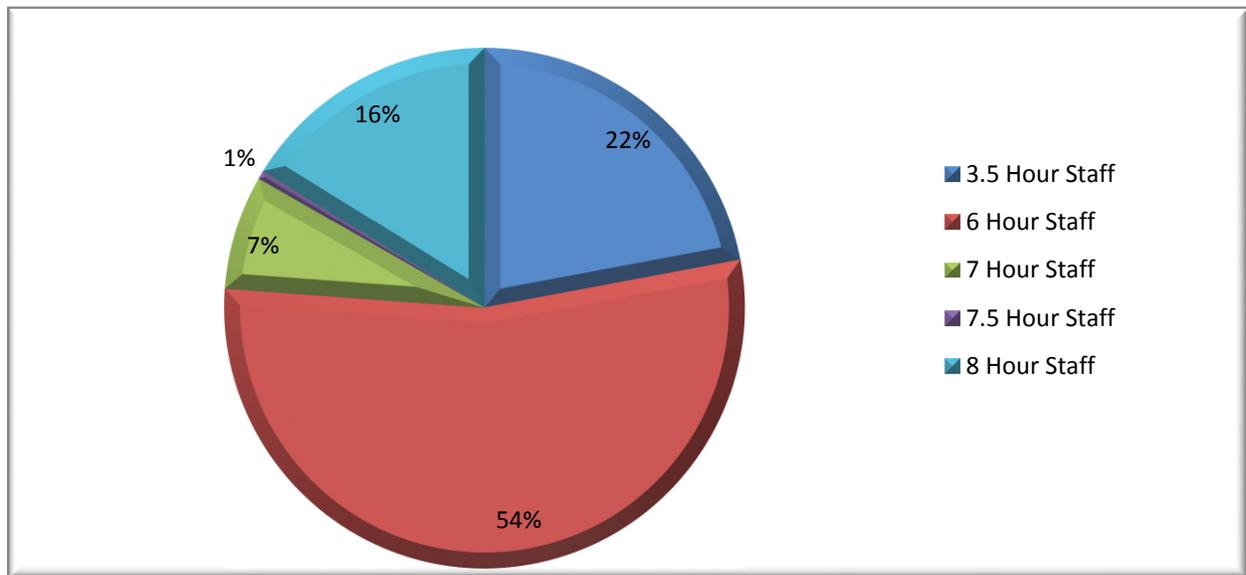
Category	2010-2011	2011-2012	2012-2013	Percent Change 2010-2011 to 2011-2012	Percent Change 2011-2012 to 2012-2013
<b>Cash Revenue</b>	\$33,107,900	\$35,345,504	\$37,718,089	6.76%	6.71%
<b>Salaries</b>	\$11,937,815	\$11,753,491	\$12,538,277	(1.54%)	6.68%
<b>Employee Insurance</b>	\$3,648,580	\$3,983,391	\$4,209,736	9.18%	5.68%
<b>Retirement Benefits</b>	\$1,614,803	\$1,579,821	\$1,723,772	(2.17%)	9.11%
<b>Social Security</b>	\$958,190	\$796,600	\$852,523	(16.86%)	7.02%
<b>Unemployment Tax</b>	\$127,673	\$132,111	\$135,324	3.48%	2.43%
<b>Total Payroll Costs</b>	<b>\$18,287,061</b>	<b>\$18,245,414</b>	<b>\$19,459,632</b>	<b>(0.23%)</b>	<b>6.65%</b>

Source: Nutrition Services, Financial Summary through the Years Report, April 2014.

Increases in employee insurance and retirement costs are pervasive throughout food services and other American industries. Higher benefit costs have strained financial resources and triggered changes in benefit eligibility policies in both private and public sector organizations. Recent practice has been to provide insurance and retirement benefits only to employees who work between 30 to 40 hours a week, or who are classified as full-time.

**Exhibit 7-8** presents the composition of 730 school-based Nutrition Service’s kitchen staff as of January 2014. In addition to cafeteria managers and kitchen staff assigned to only one school, this total includes three interns, four substitutes, 23 roving assistants, 11 roving managers, one roving cluster cashier, and 25 roving cashiers who rotate between assigned schools. As illustrated, 78 percent of school-based staff are scheduled to work between 30 and 40 hours per week (6 to 8 hours per day). These positions are eligible to receive School System’s insurance and retirement benefits. The remaining 22 percent are scheduled to work 17.5 hours per week (3.5 hours per day) and are ineligible for these benefits. One of the findings in the 2010 Council of Great City Schools review was that “the use of 3.5 hour non-benefited employees does not appear to be optimized.” However, our team also noted that no employees are scheduled to work between 20 and 30 hours per week (4, 4.5, 5, or 5.5 hours per day) even though they would still be eligible to receive insurance and retirement benefits. Thus, variable hourly schedules are not being optimized in school cafeterias.

**Exhibit 7-8**  
**Nutrition Services Department School-Based Staffing Composition**  
**January 2014**



Source: Nutrition Services, January 2014.

A commonly accepted measure of productivity in food service operations is meals per labor hour. The School System’s meals per labor hour have ranged between 16 and 17 meals per labor hour for the past three years. This is similar to productivity level averages reported in recent Key Performance Indicator reports of the Council of Great City Schools. However, a more detailed campus analysis in a recent Nutrition Services Department recap report revealed that 33 schools had productivity levels of only 7 to 14 meals per labor hour. Typically, some schools will have relatively low meals per labor hour due to inefficiencies inherent on their campuses, such as low enrollment, school policies, facility constraints, etc. Although the systemwide average productivity of 16 to 17 meals per labor hour may be similar to other districts included in recent Council of Great City Schools Key Performance Indicator reports, these averages appear low when compared with productivity levels of 29.6, 30.1, and 28.5 meals per labor hour achieved in the Riverside Unified School District, California, (one of the surveyed peer districts) over the past three years. Our findings were consistent with those of the 2010 Council of Great City Schools review, which noted that the “prevalent use of convenience foods, self-service lines, and disposables meant that the standard 18 meals per labor hour standard was probably too low for the type of meals being served.”

Some food service programs establish meals per labor hour standards based on student enrollment and school level (elementary, middle, and high school). An example of a staffing guide that includes school enrollment and meals per labor hour targets that is used by Food and Nutrition Services in Jeffco Public Schools, Colorado, is presented in **Exhibit 7-9**.

**Exhibit 7-9  
Meals Per Labor Hour Factors Based on School Student Enrollment**

<b>ELEMENTARY</b>	<b>ENROLLMENT</b>	<b>MPLH FACTOR</b>
	BELOW 200	15-17
	201-300	19-21
	301-400	22-23
	ABOVE 400	24-25
<b>MIDDLE/K-8</b>	<b>MPLH FACTOR</b>	
	<b>16-20</b>	
<b>HIGH SCHOOL</b>	<b>MPLH FACTOR</b>	
	<b>18-24</b>	

*Source: Jeffco Public Schools (Colorado), Food and Nutrition Services, April 2014.*

Based on results of the review team’s cafeteria manager survey, less than 45 percent of respondents indicated that they understood their meals per labor hour productivity results and almost 90 percent of these respondents reported that they do not regularly adjust staffing schedules based on meals per labor hour results. This is not surprising, given the findings from the 2010 Council of Great City Schools review, which noted that “some school-site managers do not know how to read or use point of sale reports and meals-per-labor-hour reports.”

Meals per labor hour results also will be influenced by a number of other factors, which include, but are not limited to:

- use of disposables versus ware-washing;
- satellite versus self-operation;
- use of convenience foods;
- number of menu items served;
- menu item preparation requirements;
- number of self-serve items;
- number of serving lines;
- number of lunch periods; and
- staggering of labor hours.

Most of the peer districts surveyed use varying degrees of centralized food production and delivery of meals, meal ingredients, products, and supplies to their schools. This strategy often increases employee productivity at satellite kitchens that require less labor hours than self-contained kitchens. For example, of the 53 serving sites in the Riverside, California's school system, 28 are satellite operations serviced by other school production kitchens. This arrangement likely contributes to the relatively high systemwide meals per labor hour. Similarly, of the 59 kitchens in the Minneapolis Public Schools' (Minnesota) system, 15 are satellite operations. In contrast, only three of the School System's 138 kitchens are classified as satellite schools. This is despite the presence of kitchens with excess capacity, such as Cane Ridge High, as previously noted, where much of the equipment and facilities are underutilized.

One way to provide more scheduling flexibility and reduce the dependence on certain employees may be to introduce cross-training into kitchen operations. In the review team's survey, one employee noted that "jobs should be rotated." For example, they indicated that "the same person prepares only meats and breads every day."

Some labor inefficiencies may also be eliminated with more accurate meal counts from teachers at schools serving breakfast in the classroom. The manager at one school with the breakfast in the classroom program stated that "most teachers mark their students as eating even when they aren't. I know this because I am having too much food sent back." The waste of preparing unnecessary meals represents both food and labor cost inefficiencies. With regards to menus at elementary schools, one manager reported the following:

*"The system needs to simplify lunch (at elementary schools)...too many items are time consuming and costly to prepare and students throw them in the trash. Healthy choices are one thing, but when it is being thrown away, the students are not benefiting. A la carte items in elementary schools should be banned. Time is very short and if students buy these items, this is what gets eaten and their lunch goes in the trash. We do not serve enough light meals (i.e., soup, sandwich, fruit, child friendly meals)."*

Based on survey comments from kitchen staff survey respondents, similar suggestions were made with regards to simplifying menus to reduce labor demands at schools. The following are some of the open-ended comments received from these respondents of changes in menus that could reduce staffing demands.

- “We need more “child-friendly” recipes at elementary schools, rather than adult meals.” The conversion to smaller meal portions of simpler menu items that are easier to prepare and more appropriate for children could reduce labor costs at elementary schools.
- Similar to the prior comment, another employee suggested that they should serve “two entrees per day rather than four or five.” This would be “simpler the easier and kids would like it.”
- “Some days the menu has too many items (i.e., casseroles, meat loaf and mashed potatoes).”
- Another comment related to the reduction of labor demands from certain menu items that require more preparation time. For example, one employee stated that “we sometimes serve two casseroles a day, which is hard to do.”

The concerns with respect to too many menu items was consistent with findings in the 2010 Council of Great City Schools review, which noted that “overproduction and an excessive number of menu choices result in large amounts of leftovers, additional labor costs, and unnecessary inventory.” The conversion to a four week menu cycle with half of the menu items served each day would reduce labor demands through reduced meal production requirements. This also would reduce the storage requirements for frozen commodity products, which we observed being a problem at some schools with less freezer space.

#### **RECOMMENDATION 7-C.1**

**Reduce payroll costs by 10 percentage points of 2012-2013 departmental total payroll expenses over the next five years.**

We recommend that Nutrition Services establish a target to reduce payroll costs by 10 percentage points of 2012-2013 total payroll costs over the next five years. To achieve these targeted reductions, we recommend the following.

- **Improve systemwide meals per labor hour results.** To optimize productivity, a combination of scheduled employees must be used, based on school level (elementary, middle, high school), average daily student meal participation, and specific school site factors (i.e., kitchen facilities and equipment, dining room capacity, school policies, etc.). There also could be more training of cafeteria managers and increased involvement on their part in terms of staffing schedules at their locations, along with cross-training of all kitchen staff to perform all jobs in the operation. As reduction in the number of items on the daily menus along with securing accurate meal counts for breakfast in the classroom also should result in increased employee productivity. The effective implementation of appropriate staffing schedules, based on campus enrollment and other campus features, should result in reduced departmental payroll costs and corresponding increases in employee productivity. This includes a transition to new schedules with more employees working between 20 and 30 hours per week.

- **Expand the number of satellite kitchen operations at the campuses.** A strategy to reduce total kitchen labor hours and increase meals per labor hour would be to select appropriate schools with relatively low enrollment and convert them from self-contained to satellite operations. In this system, food service staff at one school with an underutilized kitchen (previously discussed) will prepare meals for its students and for students at one or more additional schools in the same geographic area. The meals would be placed in insulated containers, transported, and delivered to the other school kitchens. The receiving schools' kitchen ovens and serving line steam tables would then be used to keep the food at appropriate temperatures until served. Any increases in staffing at the central kitchen required by additional meal production volume and the transporting and delivery of meals should be more than offset by reduction of labor hours at satellite kitchen locations. Thus, there should be an overall reduction in systemwide food service staff payroll costs. In addition, the cost of kitchen equipment repair and replacement should decrease, as fewer kitchens would need appliances to refrigerate or heat food items. The major capital costs will be the purchase of a sufficient number of vehicles to transport meals to the satellite operations. There also will be added supply costs of insulated containers for transporting the meals from the central kitchen to satellite locations.
- **Implement a policy change with regard to eligibility requirements for School System-paid employee insurance and retirement benefits. The Metropolitan Nashville Employee Benefits Board mandates the employee benefits requirements and should revise the eligibility requirements for employee insurance and retirement benefits to be more consistent with policies in the private sector.** The combined costs of employee insurance and retirement benefits comprise 47 percent of food service staff payroll costs. Due to the relatively high benefit costs associated with part-time positions, more school boards are examining the appropriateness of their current benefits policies. This review often results in revising policies to require employees to work a minimum of 30 hours per week to qualify for full benefits. A proposed new policy may require changes to the School System collective bargaining agreement, but could be grandfathered in to protect current 20 to 30 hour per week employees from losing their benefits. This policy change would result in long-term payroll costs savings and would better align the School System's policies with those in the private sector.

The following positions should be involved in the development and implementation of approaches to reduce departmental payroll costs.

- director of Nutrition Services;
- labor relations and administration for Human Capital Department;
- school board;
- assistant director, Field Support;
- assistant director, Business Support;
- chef;
- nutrition education and training coordinator; and
- field managers.

## **FISCAL IMPACT**

Based on 2012-2013 payroll costs of approximately \$19,479,632, a 10 percentage point reduction in payroll costs phased in over five years (2 percent reduction per year) would translate into a total payroll cost savings of \$1,947,965 over the next five years, or approximately \$389,593 per year ( $\$19,479,632 \times 2 \text{ percent reduction per year} = \$389,593 \text{ per year} \times 5 \text{ years} = \$1,947,965$ ). There will be added costs of vehicles, supplies, and equipment to expand satellite operations, but this should be offset by a reduction of kitchen equipment (i.e., refrigeration, ovens, etc.) and supply needs of satellite schools.

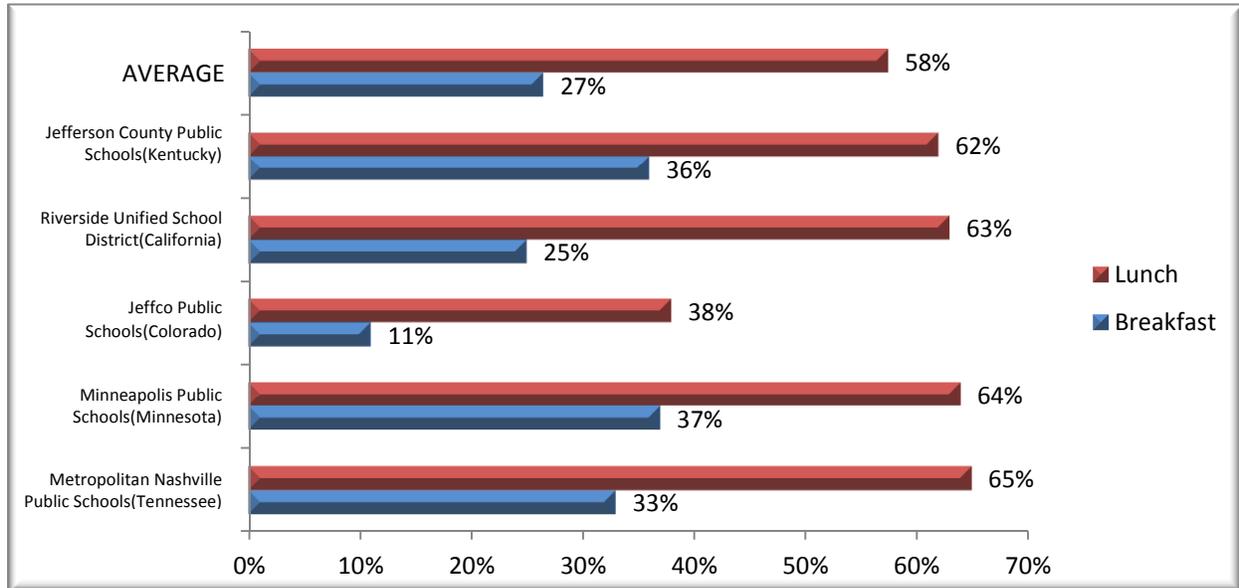
## **MEAL PARTICIPATION**

### **OBSERVATION 7-D**

**Student meal participation is low relative to peer districts when considering the percentage of the School System's students eligible to receive free and reduced-priced breakfast and lunch meals.**

Analysis of daily participation in the student and lunch and breakfast programs is determined by calculating the number of students acquiring a meal compared to the average number of students in attendance for the day. **Exhibit 7-10** compares 2012-2013 school year student breakfast and lunch participation with four peer districts. As illustrated, three of the peer districts had similar levels of lunch participation, ranging from 62 to 64 percent. The School System's lunch participation of 65 percent was slightly higher than these three peer districts. The School System's 33 percent breakfast participation represented the median of all five districts, as Jefferson County, Kentucky and Minneapolis public schools had breakfast participation of 36 and 37 percent, respectively.

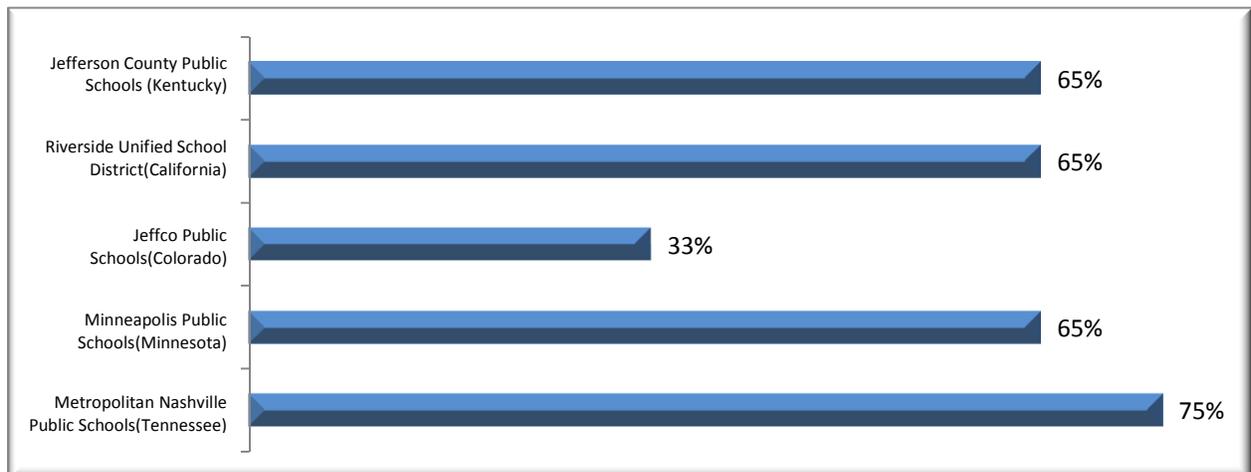
**Exhibit 7-10  
Lunch and Breakfast Participation Nutrition Services Department and Peer Districts  
2012-2013**



Source: McConnell Jones Lanier Murphy LLP Peer District Surveys, May 2014.

The level of free and reduced-priced meal eligibility must be factored into student meal participation. **Exhibit 7-11** compares the School System's student free and reduced-priced meal eligibility with peer districts. As illustrated, a key factor to the Jeffco Public Schools' low student meal participation (breakfast and lunch) was the low percentage of students eligible to receive free and reduced-priced meals (33 percent), in comparison to the peer group.

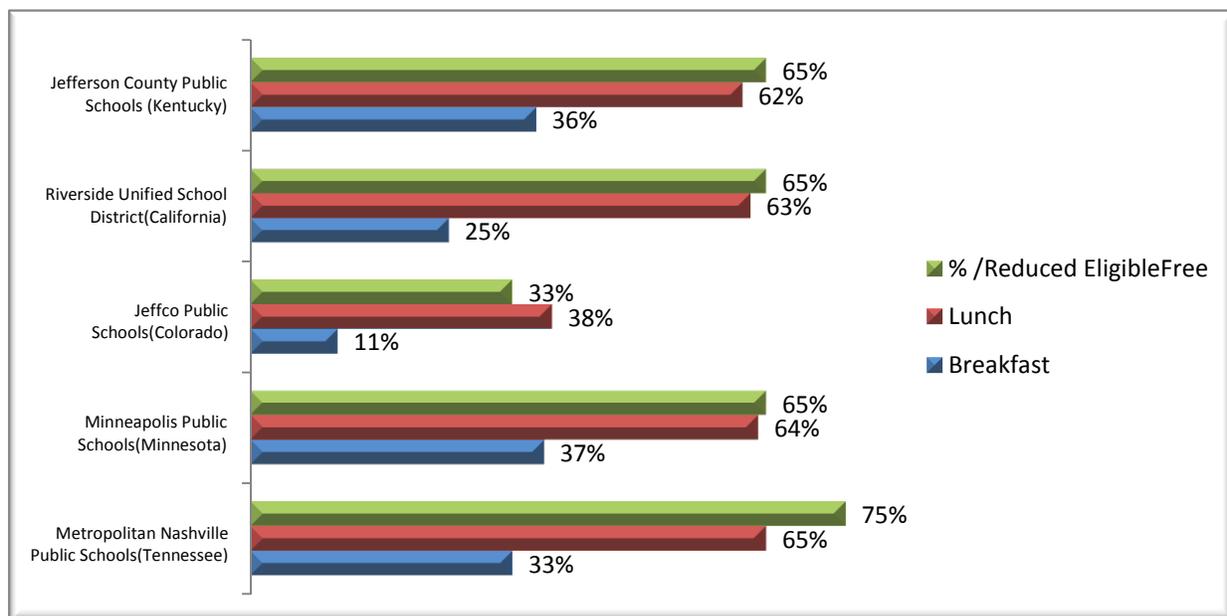
**Exhibit 7-11  
Free and Reduced-priced Meal Eligibility Nutrition Services Department and Peer Districts  
2012-2013**



Source: McConnell Jones Lanier Murphy LLP Peer District Surveys, May 2014.

Since the School System’s 75 percent student eligibility rate for free and reduced price meals is 10 percentage points above three of the peer districts, one would expect that the School System’s meal participation rate would be relatively higher than that of the three peer districts. However, this is not the case. **Exhibit 7-12** provides a comparison of the School System with its peer districts when combining breakfast and lunch participation with student free and reduced-price meal eligibility. As illustrated, the spread between lunch participation rates and free and reduced-priced meal rates ranges from 1 to 5 percentage points for the peer districts, whereas for the School System the spread is 10 percentage points. Similarly, the spread between breakfast participation rates and free and reduced-priced meal rates ranges from 22 to 29 for percent for three of the peer districts, and 40 percent for the fourth district. This compares with the School System spread of 42 percentage points. These differences indicate that although more of the School System’s students are eligible to receive free and reduced-priced breakfasts and lunches, they are not participating in the school meal program. Therefore, the School System is not maximizing student meal participation.

**Exhibit 7-12**  
**Free and Reduced-priced Meal Eligibility and Student Meal Participation Metropolitan Nashville Public Schools and Peer Districts**  
**2012-2013**



Source: McConnell Jones Lanier Murphy LLP’s Peer District Surveys, May 2014.

Observations made during school visits revealed the following barriers to increased student lunch and breakfast participation:

- Bank cards are not accepted for meal pre-payment because the point of sale system used at the schools is not compatible with Metropolitan Nashville Government’s enterprise resource planning system. The 2010 Council of Great City Schools review noted that that there was “no on-line or telephonic means of collecting pre-paid meal fees using bank cards.” This limitation reduces meal participation from paid students at all school locations but especially at the high

schools, where only 8 percent of students who participate in the school lunch program pay full price.

- There is inadequate dining area seating and serving line capacity at some schools. This constraint discourages students from participating in the lunch program due to overcrowding and inadequate seating. For example, many students were sitting in classroom hallways during the lunch period at Martin Luther King High School due to the small cafeteria dining and serving area. In elementary schools, this situation results in expanded lunch periods to accommodate student enrollment. For example, the lunch period starts at 9:30 am at Haywood Elementary to accommodate students in a small dining area with only one serving line.
- Block scheduling that includes only one lunch period at some high schools limits the potential for increased student meal participation. The longer serving lines and one lunch period discourages high school student lunch participation.
- There are limited a la carte options at high schools. For example, there are no food courts with branded menu offerings or salad bars. The 2010 Council of Great City Schools review noted that “salad bars are not offered due to alleged lack of equipment, although existing equipment could be adapted for that purpose.” The review further noted that “the department had not explored “farm-to-school options that would incorporate fresh produce into school menus.” Some of the surveyed peer districts indicated that they had implemented farm-to-school options in their school menus. Further, a la carte menu items offered are not combined to qualify as reimbursable meals to encourage additional student participation for those students eligible for free and reduced-priced meals.
- Breakfast-in-the classroom has been successfully implemented at a number of elementary schools. Following the introduction of this program at these schools, breakfast participation increased significantly. However, this program has been slow to expand due to resistance from some elementary campus administration and faculty staff.
- Surveys and focus groups are not conducted to solicit student feedback. This issue is consistent with findings from the 2010 Council of Great City Schools review, which stated that there was “no evidence that the department uses surveys or focus groups of students to gather information about meal preferences and suggestions for improvements.” It is important to better understand student tastes, preferences, wants, and needs relative to the breakfast and lunch meal programs offered at their respective schools. This includes the use of periodic surveys and focus groups to allow students to express their satisfaction with the quality, selection, and variety of meal choices, along with the dining room environment. If the menu offerings and recipes are aligned with student tastes and preferences, there is a greater likelihood that they will participate in the student breakfast and lunch program.

The following are more specific suggestions offered by kitchen staff related to specific menu items now offered at system cafeterias.

- “We need different menus. I have worked here for 20 years and still have the same menu choices on the same days (i.e., Pizza Mondays, Hamburger Fridays).”
- “There are too many carbohydrates on some menus (i.e., ravioli, tetrazzini, corn, and rolls all served in one day).”

- “A la carte items that were top sellers (brownies, chocolate chip cookies, etc.) were replaced with healthier options (i.e. oatmeal raisin grain cookies) that students do not buy.”
- “Meals are not very appealing on a lot of days...we should serve more food the children want to eat.”
- “We should serve food that children like...too much food is going in the trash.”
- “Menus need to be changed to what students want.”

The following are more specific suggestions offered by kitchen staff related to the food taste or lack of taste resulting from recipes used in meals now being served at system cafeterias.

- “Healthy foods are wonderful...they just need more home style flavor.”
- “We are not allowed to season food.”
- “Food is too bland and lacks taste.”
- “Food has a lack of seasoning.”

The following are concerns raised by kitchen staff related to procedures or practices at their specific school kitchens. Some of these are rather concerning.

- “The manager and kitchen staff should follow the recipes.”
- “At my school, we run out of food.”
- “We do not follow menus because we rarely have the items to serve the scheduled menus.”

#### **RECOMMENDATION 7-D.1**

##### **Increase student breakfast and lunch participation at system schools.**

Barriers to student lunch participation at the schools should be identified and documented in the previously recommended Nutrition Services marketing plan and strategies should be designed to reduce and/or eliminate these barriers. These strategies include, but are not limited to:

- Install compatible systems to accept online bank card payments at all schools.
- Expand and upgrade dining areas at certain schools to provide adequate seating capacity that is aligned with student enrollment.
- Increase the number of scheduled lunch periods at all high schools to better align with student enrollment and provide ample time for students to eat and enjoy their lunch.
- Expand a la carte options at high schools. This could include food courts with branded menu offerings or salad bars with farm-to-school options, and a la carte menu items combined to qualify as reimbursable meals.
- Expand breakfast in the classroom to more elementary schools. The successful implementation of this strategy will require effective collaboration between Nutrition Services management and campus administrators and school faculty/staff.

- Conduct periodic surveys and focus groups to solicit student feedback implement improvements to increase student meal satisfaction, where feasible. This includes enhancing the selection, appearance, taste, freshness, aroma, and variety of meals served.

The following positions should be involved in the development and implementation of approaches to increase student breakfast and lunch participation.

- director of Nutrition Services;
- school principals, faculty, and staff;
- the School System's Technology Staff;
- assistant director, Field Support;
- chef;
- nutrition education and training coordinator;
- field managers;
- cafeteria managers and staff; and
- students.

#### **FISCAL IMPACT**

Although some elements of this recommendation may have a fiscal impact, an estimated amount cannot be determined at this time. For example, increased meal participation would lead to increased department revenue, but this would be offset to additional costs for facility or equipment upgrades and renovations.

#### **STAFF OPTIMIZATION**

##### **OBSERVATION 7-E**

**Nutrition Services is not optimally using the field manager or chef positions to enhance the effectiveness and efficiencies in food service operations.**

Although the newly created chef position is a positive and needed addition to the Nutrition Services Department, this position could be used more effectively and efficiently. The chef position is involved with the nutrition education and training coordinator in menu and recipe development. Most of these activities involve training cafeteria managers and kitchen staff on recipes, food preparation procedures, equipment use, and the merchandising of menu items on serving lines. To accomplish this hands-on training, the chef must physically go to each school for two to three days to work with managers and kitchen staff. Since there are 138 kitchen preparation and service school sites, hands-on training can only be provided to a limited number of managers and kitchen staff each year.

Field managers are not assigned to schools based on geographical areas, but rather according to school level (i.e., elementary, middle, high school). For example, one field manager is responsible for the oversight of all 16 high schools. These arrangements have apparently been in existence for a number of years, since the 2010 Council of Great City Schools review noted that “Field Managers are not assigned to schools based on geographic areas, resulting in excessive time lost in commuting between sites.” The oversight of schools sites spread across a wide geographic area results in inefficiencies due to distances between schools, fewer sites that can be visited each day, and higher car mileage expenses.

Based on the McConnell Jones Lanier & Murphy LLP’s cafeteria manager surveys, only 58 percent of respondents indicated that the field managers assigned to their schools visit their locations at least once a month. This situation indicates a lack of regular presence, oversight, and support by some field managers of their assigned kitchen operations.

In addition to a lack of documented performance standards, as previously discussed, there also are no standardized procedures or timeframes for the field managers in conducting school site visits. Although there is a short form to be completed upon the completion of school site visits, the content of the form is limited in scope and there are no specific guidelines as to how often these forms are to be completed or what actions should be taken upon submission of the forms to the assistant director of Field Operations.

Since principals are now responsible for the performance evaluations of cafeteria managers at their respective schools, field managers do not have adequate authority to supervise the kitchen operations of their assigned school sites. Instead, field managers serve more in an advisory or support role than in a supervisor capacity. School principals and food service administrators typically have a dual-supervisory relationship in most school districts. This role includes hiring, terminations, and evaluations of school-based food service managers and employees. In 80 percent of the peer districts surveyed, the food service area supervisors or operations managers are responsible for conducting annual performance evaluations for the cafeteria managers. It also was noted that not all the School System’s cafeteria managers receive performance evaluations each year. One manager commented that “I have not had a performance review by my Field manager or Principal in over three years” and “the only feedback I ever get is when something is wrong.”

#### **RECOMMENDATION 7-E.1**

##### **Establish centralized training and testing kitchens at select school locations.**

Schools that have underutilized kitchen space, equipment, and serving lines, as previously discussed, should be identified and selected as training sites for cafeteria managers and kitchen staff. For example, more food service site personnel could be trained if Nutrition Services designated the underutilized Cane Ridge High School kitchen as a testing and training kitchen. Cafeteria managers and kitchen staff from Cane Ridge High and other schools in that geographic area could receive hands-on training during scheduled timeframes in the school year, especially when schools are not in session. These centers could also be used for the orientation and training of all new food service employees. The chef and nutrition education and training coordinator could use these as test sites for new recipes and menu offerings and also could develop online training modules for cafeteria managers.

Although the 2010 Council of Great City Schools review noted that “the department does not use the employee portal on the system’s web-site to provide on-line training,” there is still no online training for kitchen staff working at system schools. Central menu/recipe testing sites and orientation/training kitchens, along with the introduction of online training, would significantly improve efficiencies in system food service operations. Based on the McConnell Jones Lanier & Murphy LLP’s manager survey, over 64 percent of the respondents were receptive to the idea of going to another cafeteria to be trained by the chef on new recipes, food preparation procedures, food presentation, and serving methods.

The effective implementation of this strategy will require collaboration between the director of Nutrition Services and Principals of select schools. The chef, nutrition education and training coordinator, field managers, and cafeteria managers will be responsible for the implementation of these testing and training kitchens at selected school kitchens.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

#### **RECOMMENDATION 7-E.2**

##### **Reassign field managers to select schools based on geographic locations.**

Field managers should be assigned to schools located in the same geographical areas. Further, they should be relocated from the central campus temporary building to one of the larger kitchens in their assigned area. It would be most desirable if the field managers were located in test and training kitchens (see prior recommendations) in their areas, where feasible. These reassignments and relocations should provide greater efficiencies to field managers in their oversight of their assigned schools. It should allow them to have more frequent visits, more involvement, and an increased presence at their assigned schools. Thus, more sites can be visited each day and there will be reduced car mileage expenses.

Another approach suggested by one of the cafeteria managers would be to rotate field managers to different areas. For example, field managers may serve several years over one group of schools and then rotate to another set of schools in a similar geographic area. This would allow different field managers to work with different cafeteria managers and could benefit both positions through new and innovative approaches to operations.

The effective implementation of this strategy will require collaboration between the director of Nutrition Services, affected school principals, the assistant director of Field Support, and field managers.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

**RECOMMENDATION 7-E.3****Develop and implement more comprehensive field manager site visitation procedures.**

As previously recommended, the director of Nutrition Services, assistant director of Field Support, and assistant director of Business Support should document performance and efficiency standards and implement them into all system food service operations. The field managers would then be responsible for evaluating the variance analysis that compares several key performance targets with actual results at their assigned campus food service operations. To be most effective, site visitation reports should include, but not be limited to, targets and results by campus for the following performance measures:

- food costs (as a percentage of revenue);
- payroll costs (includes both wages and benefits as a percentage of revenue);
- employee productivity (Meals Per Labor Hour);
- student meal participation (breakfast, lunch, and breakdown by free, reduced, and paid);
- net income/loss; and
- results of the School System's student meal satisfaction surveys.

Field managers should work closely with the cafeteria managers at their schools to correct any unfavorable variances from campus-level performance targets in a timely manner. This process should result in more formalized and standardized procedures for conducting site visitations. It is recommended that these site visitations be completed and submitted on a monthly basis following the reporting of monthly results by school. However, with the reassignment of field managers, it should be expected that they visit each of their assigned schools on an informal basis at least on a bi-weekly basis to maintain a presence at these locations and show support and assistance for cafeteria managers and kitchen staff. The effective implementation of this strategy will require collaboration between the director of Nutrition Services, school principals, the assistant director of Field Operations, and field managers.

**FISCAL IMPACT**

This recommendation can be implemented with existing resources.

**RECOMMENDATION 7-E.4****Increase the role of field managers in completing cafeteria manager performance evaluations.**

Currently, cafeteria manager performance evaluations are completed by their school's principal with some input from field managers. This shift of performance evaluation responsibility will involve a re-evaluation by the Human Capital Services Department, which has decision-making authority at campus food service operations in areas such as performance expectations, staffing levels, quality assurance, and operating efficiencies. To avoid this confusion, the School System should clarify and balance authority and responsibilities for food service administration, field managers, and school Principals.

This should include a functional organizational chart and job descriptions to help managers and staff understand their organizational relationships, assign responsibilities, and avoid conflicts.

Although field managers may be given the primary responsibility for the performance evaluations of cafeteria managers at their assigned schools, they should consult with school principals and collaborate with them on an ongoing basis to get their input into these performance evaluations. This will provide field managers with increased authority to be adequately perform their supervisory responsibilities at their assigned school locations. Field managers also could involve the cafeteria managers in the hiring process. According to one manager, they “should be more involved with the hiring of new staff at their schools.”

The effective implementation of this strategy will require collaboration between the director of Nutrition Services, school principals, the assistant director of Field Operations, field managers, and cafeteria managers.

### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

### **OBSERVATION 7-F**

**There are no safes or armored car pickups of cash at schools.**

Cafeteria managers are responsible for securing daily cash receipts and eventually transporting the funds from their school to local banks for deposit. Since safes are not located on campuses, cash is often locked in kitchen storage areas, such as freezers, until it can be transported to banks. This represents an internal control weakness and presents a security threat to cafeteria managers and the safeguarding of cash. This finding also was noted in the 2010 Council of Great City Schools review, which noted that “cafeteria managers are required to take cash deposits home or to the bank because safes or armored car pick-ups are not available at schools. “Conversely, all surveyed peer districts use armored car services to pick up cash from schools and transport the funds to local banks on either a daily, bi-weekly, or weekly basis. Campus bookkeepers also transport cash to the bank in their personal vehicles. During interviews, some bookkeepers were not comfortable with this task, but felt they were required to accept the risk because it is a part of their job responsibility.

## **ARMORED CAR SERVICES**

### **RECOMMENDATION 7-F.1**

**Initiate a contract with an armored car service or certified law officers to transport cash from schools to banks for deposit.**

Bids should be solicited and an armored car service contracted for the daily pick up and transport of cash from the schools. A more effective consideration may be to use certified and armed law officers to transport district funds to banks in secure district vehicles. In addition, safes should be installed in the

central office of all schools to hold cash prior to it being transported to the banks. The safe should be accessible to bookkeepers as well as cafeteria personnel. Safe transport of cash to the bank will improve internal controls and reduce the security threat to campus personnel and school funds. The effective implementation of this strategy will require collaboration between Purchasing, Accounting, Nutrition Services, and campus administration.

**FISCAL IMPACT**

The fiscal impact of this recommendation cannot be determined until bids have been received and evaluated.

## ALTERNATIVE SOURCING AND LEVERAGING OPPORTUNITIES

Shared services agreements exist between two or more entities whereby one of the entities will provide a service to the other entities and all of the entities participating in the agreement share the costs associated with providing the respective service(s). These agreements generally result in cost savings to all of the participants. Large school districts do not have any incentive to enter into shared service arrangements and generally do not do so because they already have economies of scale. However, the School System's Nutrition Services should consider working with charter schools and surrounding school systems to provide some of the common food service management activities such as financial reporting, menu planning, purchasing, employee training, through shared service agreements. This would allow Nutrition Services to offset some of the central staffing labor costs.

## PRIVATIZATION/OURSOURCING POSSIBILITIES

The School System frequently turns to private companies to manage some support system functions such as food services in order to save costs or help them turn around deficit operations. Outsource providers generally focus on increasing productivity, lowering labor costs, and lowering food costs to save money.

Two national food service management providers, which are described herein as Vendor A and Vendor B, analyzed the School System's Nutrition Services financial statements and staffing composition to determine a preliminary cost per meal if they were to become the outsourced management company. Vendor A calculated that the School System's average cost per meal is \$3.18 and that they may be able to provide a fixed price per meal in the range of \$2.95 to \$3.05, or a savings of \$.13 to \$.23 per meal equivalent served for a potential total annual cost savings range between \$1,546,615 to \$2,736,319. Vendor B calculated average cost per meal of \$3.25 to \$3.53 per meal, or an increase of \$.07 to \$.36 per meal, which includes rebates to the School System for purchasing food and supplies through the national food service provider's purchasing contracts and is anticipated to be offset through increased meal participation.

It is important that the readers of this report understand that the preliminary cost and savings estimates provided by the two national food service providers are based on current financial statements and meal participation rates. In order for the School System to obtain an accurate estimate of any potential cost savings, a formal request for proposal process must be undertaken and the potential food service providers must perform in-depth analysis of the operations and conduct site visits of the School System's cafeterias and kitchens.

**Exhibit 7-13** shows the potential annual costs savings if the School System were to outsource their food service program. Vendor A also noted that the current labor force and structure for attrition of employees would have a material bearing on the fixed price given the current staffing structure.

**Exhibit 7-13  
National Food Service Provider “Vendor A” Potential Annual Cost Savings**

	Vendor A Low Range Cost Savings Estimate	Vendor A High Range Cost Savings Estimate	Vendor A Average Cost Savings Estimate
Metropolitan Nashville Public Schools Cost Per Meal	\$ 3.18	\$ 3.18	\$ 3.18
Quoted Cost Per Meal	\$ 3.05	\$ 2.95	\$ 3.00
Potential Per Meal Savings	\$ 0.13	\$ 0.23	\$ 0.18
Total Meal Equivalents	11,897,040	11,897,040	11,897,040
<b>Potential Annual Savings</b>	<b>\$ 1,546,615</b>	<b>\$2,736,319</b>	<b>\$ 2,141,467</b>

Source: Review Team Calculations based on National Food Service Provider Feasibility Study, July 2014.

Vendor A’s cost per meal is dependent upon increasing meal participation and lowering labor costs. Vendor A’s findings and analysis is very similar to those noted by the review team as reflected in the body of this report. **Exhibit 7-14** provides a summary of Vendor A’s findings and parameters for which their anticipated fixed cost per meal is based.

**Exhibit 7-14  
National Food Service Provider “Vendor A” Feasibility Study Summary**

Revenue/Cost Category	National Food Service Provider Assumption	National Food Service Provider Estimated Savings or Increased Revenue	Review Team Comments
Breakfast Participation	Increase breakfast participation from 33 percent to 70 percent.	\$2,500,000 increased revenue per year.	The increased revenue would need to be offset by additional food and labor costs required to prepare and serve the additional meals.
Lunch Participation	Increase lunch participation from 65 percent to 85 percent.	\$3,500,000 increased revenue per year.	The increased revenue would need to be offset by additional food and labor costs required to prepare and serve the additional meals.
Labor Costs	Low productivity and high labor costs. These are potentially going to be managed through increasing meal participation and managing hours through employee attrition.	No financial estimate provided.	Noted high labor costs in finding 7-D of this report and recommended 10 percent cost reduction over next five years.

Source: National Food Service Provider Feasibility Study, July 2014.

Analysis of the preliminary proposal submitted by Vendor B shows that the School System’s food service program average cost per meal would increase, but that they could potentially increase net profit by \$1,198,501 to \$4,813,035 each year by reducing labor and food costs, increasing lunch and breakfast participation and adding supper and summer food programs. An additional \$2,000,000 could be saved if the School System fully outsourced their food service program, including the transfer of all staff to the contractor. It is important to note that approximately \$2,100,000 to \$2,500,000 of the expense savings comes from estimated rebates provided through the contractor using their national purchasing opportunities to reduce food and supply costs. **Exhibit 7-15** provides an analysis of potential revenue increase.

**Exhibit 7-15  
National Food Service Provider “Vendor B” Potential Annual Revenue Increase**

Category	Metropolitan Nashville Public Schools	Vendor B Scenario 1 *	Vendor B Scenario 2 **
Total Expenses	\$ 37,815,803	\$ 38,684,863	\$ 42,049,889
Cost Per Meal	\$ 3.18	\$ 3.25	\$ 3.53
Potential Net Revenue Increase**		\$ 1,198,501	\$ 4,813,035
All Labor Transferred to Contractor		\$ 2,000,000	Included in Estimated Expenses
<b>Total Potential Net Revenue Increase</b>	<b>N/A</b>	<b>\$ 3,198,501</b>	<b>\$ 4,813,035</b>

Source: Review Team Calculations based on National Food Service Provider Feasibility Study, August 2014

\* Scenario 1 - Includes potential rebates passed to Metropolitan Nashville Public Schools for national purchasing of food and supplies by the contractor.

\*\* Scenario 2 - Additional potential net profit is based on increasing lunch and breakfast participation, adding a supper and summer school programs program.

A national food service provider may be able to implement these recommendations and lower costs and increase the School System’s food service program profitability. However, it is our opinion that the current Nutrition Services management and staff are competent and capable of successful implementation of our recommendations made in this report and summarized as follows.

- **Develop and implement a more formalized planning process.** This includes the documentation of operating, financial, and facilities plans, along with annual reports to communicate program accomplishments. The implementation of these plans should result allow management to be more proactive in leading the department, while enhancing the effectiveness and efficiency of campus food service operations.
- **Strengthen implementation of performance accountability systems.** This includes the simplification of current performance indicators provided to cafeteria managers and field managers and the training of these positions to better utilize the information in enhancing their respective school food service operations.
- **Reduce departmental labor costs.** A number of approaches, as presented in this chapter, can be used for incremental decreases to program labor costs to meet recommended target reductions over the next five years. These reductions are achievable through ongoing

adjustments to kitchen staffing and productivity levels and other corresponding increased labor efficiencies discussed in this chapter.

- **Increase student breakfast and lunch participation.** The program is achieving similar student participation results as surveyed peer districts, but the gap could be widened from these peer districts to correspond with the system’s higher percentage of students eligible to receive free and reduced-priced meals. Recommendations provided in this chapter were related to approaches to increase the student breakfast and lunch participation gap with these peer districts.
- **Optimize the use of the chef and field manager positions.** The implementation of training and test kitchens, relocation of chef and field manager positions, and increased involvement of field managers should result in both quality and efficiency improvements in campus food service operations.

Based on the review team’s evaluation, the School System’s Nutrition Services Department has performed well relative to a number of school food service key success factors. As presented in this chapter and in **Exhibit 7-16**, Nutrition Services management has effectively or efficiently managed the department’s human and financial assets.

**Exhibit 7-16**  
**Nutrition Services Performance Compared to Key Success Factors**

Success Factor	Description
Financial Position	Nutrition Services is in a sound financial position with a \$14,353,514 program fund balance at end of 2012-2013.
Financial Management	Budgeting and financial reporting has been implemented at the campus level by the director of Business Support.
Food Costs	The School System’s food cost was much lower than surveyed peer districts. This indicates that effective food cost control systems have been implemented into campus food service operations.
Innovative programs and activities	Nutrition Services has successfully introduced the breakfast in the classroom program to some elementary schools and has received federal grants to participate in additional programs (Fresh Fruit and Vegetable, After School Enrichment, Snack, and Summer Camp programs).
Initiatives to enhance the quality and nutrition of meals served to students	The new Chef position was created to work with program’s nutrition and education coordinator to develop healthy and nutritious menus and to improve the quality and merchandising of meals served at system cafeterias.
Best practices awards for serving healthy and nutritious meals	Through the leadership of the nutrition education and training coordinator, the program has received numerous awards in the past several years.
Proactive leadership in working with community advocacy groups.	The director of Nutrition Services and nutrition training and education coordinator have worked in cooperation with local advocacy groups, such as the Alignment Nashville nutrition committee, to serve healthier and more nutritious meals in system schools.
Employee job satisfaction	Over 80 percent of the 400 kitchen staff and 50 managers responding to the McConnell Jones Lanier & Murphy LLP’s survey were satisfied with their jobs, supervisors, and work environment.
Program compliance	The program is in compliance with United States Department of Agriculture Child Nutrition Program and local health department regulations.

*Source: Interviews with Child Nutrition staff and documentation provided.*

Vendor A has presented an average lower cost per meal, which is premised upon lowering labor and food costs and Vendor B provided estimates of increased revenues based on increasing meal participation and adding additional meal programs, based on the success achieved by Nutrition Services relative to the key success factors presented in **Exhibit 7-16** and discussed in this chapter.

The current departmental management should make significant efforts to implement the recommendations presented in this chapter. This will allow for continued improvement to further strengthen the department's financial, human, and capital assets. However, if labor cost reductions are not achieved by the end of 2016-2017, the School System should proceed with an outsource request for proposal process. It should be noted that The School System will not be able to redirect any of these potential cost savings for education delivery. Rather, these savings will more directly benefit the United States Department of Agriculture's Child Nutrition Program.

### **FISCAL IMPACT**

Based on Vendor A's average cost estimate, the School System has the opportunity to save \$2,141,467 annually beginning in school year 2016-2017. Only cost savings estimates from Vendor A are considered as Vendor B's cost savings estimate is contingent on rebates.

## FISCAL IMPACT SUMMARY

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 7: NUTRITION SERVICES</b>								
7-A.1	Develop and implement Nutrition Services operating and financial plans.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7-A.2	Integrate performance standards into campus food service operations.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7-A.3	Develop and implement a Nutrition Services marketing plan.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7-A.4	Generate annual reports that document the Nutrition Services accomplishments, innovative practices, and successful initiatives.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7-B.1	Develop and approve a Nutrition Services long-term facilities and equipment plan.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7-C.1	Reduce payroll costs by 10 percentage points of 2012-2013 departmental total payroll over the next five years.	\$389,593	\$389,593	\$389,593	\$389,593	\$389,593	\$1,947,965	\$0
7-D.1	Increase student breakfast and lunch participation at system schools.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7-E.1	Establish centralized training and testing kitchens at select school locations.	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**FISCAL IMPACT SUMMARY (Cont'd)**

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 7: NUTRITION SERVICES</b>								
7-E.2	Reassign field managers to select School System schools based on geographic locations.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7-E.3	Develop and implement more comprehensive field manager site visitation procedures.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7-E.4	Increase the role of field managers in completing cafeteria manager performance evaluations.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7-F.1	Initiate a contract with an armored car service or hire certified law officers to transport cash from schools to banks for deposit.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTALS—CHAPTER 7 WITH IMPLEMENTATION OF REVIEW TEAM RECOMMENDATIONS</b>		<b>\$389,593</b>	<b>\$389,593</b>	<b>\$389,593</b>	<b>\$389,593</b>	<b>\$389,593</b>	<b>\$1,947,965</b>	<b>\$0</b>
<b>TOTALS—CHAPTER 7 WITH OUTSOURCING IN YEAR TWO** , if labor cost reductions are not achieved by the end of 2016-2017, the School System should proceed with an outsource request for proposal process.</b>		<b>\$389,593</b>	<b>\$2,141,467</b>	<b>\$2,141,467</b>	<b>\$2,141,467</b>	<b>\$2,141,467</b>	<b>\$8,955,461</b>	<b>\$0</b>

\* Based on national food service provider A preliminary average cost per meal analysis. Provider B was not used in the cost savings calculation as they provided revenue increases based on increased meal participation and cost savings based on rebates.

## Management Response

NUTRITION SERVICES

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
Management of Metropolitan Nashville Public Schools should:			
7-A.1	Develop and implement Nutrition Services operating and financial plans.	<p><b>Accept</b></p> <p>MNPS Nutrition Services has established operational goals which are a combination of ongoing and annual goals. These goals are in line with Key Performance Indicators (KPIs) the Council of Great City Schools uses to evaluate nutrition service in its member districts. Periodic meetings with members of supervisory staff provide input and constructive criticism regarding operations that are used to advise the Nutrition Services director toward final decisions.</p> <p>The Nutrition Services director will work to formally create the department vision utilizing input, collaboration and feedback from department members, students, parents, and the community. This input will be part of planning annual budgets and making appropriate operating decisions.</p>	August 2015
7-A.2	Integrate performance standards into the School System's campus food service operations.	<p><b>Reject</b></p> <p>MNPS Nutrition Services historically and currently utilizes the Council of Great City Schools (CGCS) KPIs (Key Performance Indicators) as the comparative data for the operation of the department. MNPS has identified the CGCS KPIs as the most comparable data to use for performance standards for a large school system operation. In addition to these Key Performance Indicators, data from other Tennessee departments is used for comparison to benchmark local performance. Nutrition Services will continue to utilize the CGCS performance standards to guide and evaluate its operation.</p>	N/A
7-A.3	Develop and implement a Nutrition Services marketing plan.	<p><b>Accept</b></p> <p>Nutrition Services is constantly working on methods to improve food quality, staff service and the dining area environment. Currently, staff tests all new products with student panels before</p>	July 2015

## Management Response

NUTRITION SERVICES

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		adding to the menu. This provides valuable feedback regarding student taste preferences as employees work to provide healthy and tasty meals. Nutrition Services has hired a chef whose primary function is to help improve food quality in terms of taste, presentation and consistency within budgetary guidelines. Presently, the chef is helping improve one school at a time; the department realizes it will need to explore electronic/video methods to reach more café staff. A formal plan will be created and introduced.	
7-A.4	Generate annual reports that document the Nutrition Services accomplishments, innovative practices, and successful initiatives.	<b>Accept</b> This recommendation will be incorporated into the planning and development of the district's strategic communications plan. Nutrition Services does document and promote its positive accomplishments through presentations to the Board of Education and through district, local, state and national mediums. Additionally, Nutrition Services won the 2014 TN Department of Education and the USDA Best Practice Awards for "Creating a Healthier School Environment" for its committee work with Alignment Nashville.	June 2015
7-B.1	Develop and approve a Nutrition Services long-term facilities and equipment plan.	<b>Partially Accept</b> Nutrition Services does not have a formal capital replacement plan. However, the department does evaluate capital equipment needs annually and documents capital equipment issues throughout the year. The department works diligently to keep all capital equipment in good working order and uses both in-house and contractors for equipment repair. After a thorough evaluation is complete, the request for equipment is included in the annual budget. It is not financially feasible for Nutrition Services to rely heavily on the age of equipment as the primary factor for replacement.	February 2015

## Management Response

NUTRITION SERVICES

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		Nutrition Services does have a kitchen equipment inventory standard regarding production equipment housed in cafés. Prior to the audit, Nutrition Services was actively working toward development of a fixed asset inventory, which was completed in the summer of 2014.	Inventory completed Summer 2014
7-C.1	Reduce payroll costs by 10 percentage points of 2012-13 departmental total payroll over the next five years.	<p><b>Reject</b></p> <p>MNPS Nutrition Services is limited in its ability to reduce payroll costs as suggested in this recommendation. Employees receive the same salary increases and benefits as all other MNPS employees. Support employee benefits are the responsibility of the Metro Benefit Board operated by Metro General Government, which also defines a full time employee eligible to receive benefits as anyone working 20 hours or more per week.</p> <p>Nutrition Services competes for employees from a pool that has many hospitality employment opportunities from around the city. The department has successfully navigated higher labor costs by utilizing part-time employees, using six- and seven- hour workers instead of eight-hour workers, and choosing to cluster some schools for manager supervision. Work hours are considered against the backdrop of the city's available employee pool and the cost of employee turnover and training.</p>	N/A
7-D.1	Increase student breakfast and lunch participation at system schools.	<p><b>Accept</b></p> <p>In August 2014, MNPS Nutrition Services implemented the Community Eligibility Program. This is a USDA program for high needs school systems to allow the entire school or district's students to eat breakfast and lunch at no cost to the student. A comparative analysis shows an average increase of 20,000 meals per day over the same period last year.</p>	August 2014

## Management Response

NUTRITION SERVICES

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		Participation has been boosted to about 46% of ADA at breakfast, which is above the CGCS median of 29%, and about 78% of ADA at lunch, which is above the CGCS median of 58%. Nutrition Services has expanded the breakfast in the classroom program with the addition of sites in 2014-2015 and continues to promote expansion through communication with site principals and staff.	
7-E.1	Establish centralized training and testing kitchens at select school locations.	<b>Partially Accept</b> While this recommendation is for several test kitchens, MNPS Nutrition Services is collaborating with the Facilities Planning and Construction Department to relocate its central operations and training facilities, as well as create a test kitchen and satellite production model. Several sites have been considered and needs assessments have been created. At this point, a workable, acceptable site has not been located. As this plan is created, it will also include capital funding necessary to remodel the facility for Nutrition Services and other joint MNPS uses.	Dependent upon site availability and capital funding
7-E.2	Reassign field managers to select School System schools based on geographic locations.	<b>Accept</b> MNPS agrees with this recommendation and notes that assigning field managers based on geographic locations is the existing practice for Nutrition Services. MNPS has historically assigned all but one field to schools based on geographic area. The field manager not assigned per geographic area is the person who oversees all high school cafés.	Already in place
7-E.3	Develop and implement more comprehensive field manager site visitation procedures.	<b>Accept</b> Standardized site visit forms will be developed and included in manager evaluation documentation.	August 2015
7-E.4	Increase the role of field managers in completing cafeteria manager performance evaluations.	<b>Accept</b> MNPS Nutrition Services is implementing a more comprehensive management evaluation tool that will include input from the school principal, but will be the responsibility of the field manager to complete. This is a change from previous evaluations	August 2015

## Management Response

NUTRITION SERVICES

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		which were completed by the school principal.	
7-F.1	Initiate a contract with an armored car service or certified law officers to transport cash from schools to banks for deposit.	<p><b>Partially Accept</b>            MNPS has implemented the Community Eligibility Provision program and is providing meals at no cost to all students. (see 7-D.1) As expected, daily cash collections have dropped significantly. Armored car pick up and the placement of safes in facilities have been discussed over the years. Risk management and costs continue to be weighed and assessed. The report's recommendation will be given consideration and discussed in collaboration with other applicable departments.</p>	January 2015
Chapter 7 - Alternative Sourcing Recommendation (page 7-39).			
	If labor cost reductions are not achieved by the end of 2016-2017, the School System should proceed with an outsource request for proposal process.	<p><b>Partially Accept</b>            Labor cost comparisons show that while salary scales for Nutrition Services are comparable to other school systems, Metro General Government benefits have better employee options at slightly more cost than comparable school nutrition operations.</p> <p>Various configurations can be used to achieve successful operation of school nutrition programs in a school district. Shared services and outsourcing are among them. MNPS Nutrition Services has had a solid history of being regulatory compliant and fiscally responsible while serving a large population of students. Varying philosophies abound surrounding what a successful program looks like, the role of school nutrition programs in education, as well as the role of MNPS being an employer in the city. These, along with revenues and operating costs, are considered in determining desired program strategies and outcomes when making business and operating decisions. Currently, MNPS Nutrition Services chooses to maintain business operations in-house while always seeking revenue opportunities</p>	Ongoing

## Management Response

NUTRITION SERVICES

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		<p>and cost efficiencies. The performance report's summary of recommendations will further aid the department in planning and building on its strong child nutrition programs. Implementation of the Community Eligibility Provision in the 2014-15 school year has increased meal participation by an average of 20,000 meals per day. At this point, consideration for outsourcing is not relevant to the current operation.</p>	

## CHAPTER 8 – TRANSPORTATION

### BACKGROUND

The Metropolitan Nashville Public Schools System (the School System) is located in Davidson County, Tennessee and encompasses an area of approximately 533 square miles in and around the City of Nashville, Tennessee. The School System's Transportation Department operates its own fleet of school buses providing transportation to over 51,000 eligible pre-kindergarten through twelfth grade students daily. There are a total of 682 school buses in the fleet of which 653 are active. Of the 653 active school buses there are 202 buses that transport students with special needs. The School System also uses the services of the Metropolitan Transportation Authority for the transportation of students in systemwide programs including magnet schools. The Transportation Department is instrumental in the School System's vision to "build and sustain effective and efficient systems to support finances, operations, and the academic and personal growth of students". The Transportation Department fulfills this vision by providing safe, on-time, and efficient services busing students to and from school as well as athletic and co-curricular trips.

The 2013-2014 Transportation Department budget of \$35,933,000 is approximately 4.8 percent of the School System's \$746,420,300 operating budget. The Transportation Department budget does not include capital expenditures for new buses. A transportation department's performance is rated in several categories against national school transportation measures as well as peer district measures. These measures include rankings from the Council of Great City Schools, which represents more than 60 large urban school districts across the country. Performance measures include, but are not limited to the following:

- cost per student per year overall and individually within general and exceptional education;
- cost per bus per year overall and individually within general and exceptional education;
- number of buses required to transport 100 students;
- capacity use or how well the department fills the buses;
- number of accidents per one million miles; and
- percent of the transportation budget relative to the total School System budget.

### CHAPTER HIGHLIGHTS

- The Transportation Dispatch Center provides excellent customer service and routing support information.
- Changes to maintenance practices have had a positive and substantial impact on the department's ability to provide on-time service.
- Transportation and maintenance operations are understaffed.
- Improvements in information technology are necessary to increase the efficiency and effectiveness of fleet maintenance services.
- A significant backlog of fleet replacement has accumulated and must be addressed.
- Exceptional education transportation costs are significantly above norms due to the legal requirements of an ongoing consent decree.
- Estimates from a national student transportation outsource provider suggest that the School System could potentially save \$4,097,300 annually and avoid investment costs of \$3,200,000 on an annual basis associated with school bus and white fleet replacement over the next five years if outsourcing student transportation is implemented.

These and other performance measures are detailed and discussed later in this chapter.

## **ORGANIZATIONAL STRUCTURE**

Any large school system requires substantial supervisory and employee support within the organizational structure to provide for:

- planning and routing of school buses;
- athletic and co-curricular field trips;
- dispatching of vehicles and personnel;
- fleet maintenance;
- safety training for new and current staff;
- budgetary support;
- inventory control;
- technical support including office and garage software and hardware;
- bus video systems; and
- customer service.

**Exhibit 8-1** represents the multi-faceted organizational support structure of the Transportation Department, which includes a total of 827 employees.

**Exhibit 8-1  
Transportation Department Organization-2012-2013 and 2013-2014**



Source: Metropolitan Nashville Public Schools.

The department is led by the executive director of Transportation and Central Services and is supported by the positions that include the following:

- general education operations manager who is supported by:
  - two coordinators;

- twelve field supervisors;
  - 308 general education bus drivers; and
  - 30 general education substitute bus drivers.
- exceptional education operation manager who is supported by:
  - one coordinator (open position);
  - one routing specialist (open position);
  - 208 exceptional education bus drivers;
  - 220 exceptional education bus monitors;
  - one roster coordinator; and
  - three exceptional education dispatchers.
- routing, dispatch and field trip manager who is supported by:
  - four dispatchers;
  - two routers; and
  - one field trip specialist.
- business operations manager who is supported by:
  - one accounts payable and receivables processing and budgeting employee;
  - one inventory control and business reporting employee;
  - one technical support employee;
  - one parts ordering, receiving and distribution employee;
  - one payroll processing employee; and
  - one fuel receipts employee.
- fleet operations manager who is supported by:
  - one shop foreman;
  - one assistant shop foreman;
  - two service writers;
  - two lead mechanics; and
  - eleven mechanics.
- training and safety operations manager who is supported by:
  - one coordinator and third-party testing employee; and
  - three driver training specialists.

The transportation director and managers recently (October 2013) reorganized the department to better represent each division’s goals and objectives and to provide clarity of employee responsibilities. The reorganization is ongoing. There are two open positions under the Exceptional Education Operations Division that include the coordinator and routing specialist. Routing and dispatch operations are short one dispatcher. As with most school districts across the country, the School System struggles with maintaining bus drivers. Employment opportunities for drivers are routinely on the School System’s website. Bus mechanic shortages are discussed later in this chapter.

## BEST PRACTICES

Best practices are methods or techniques that have consistently shown positive results and that can be replicated by other organizations as a standard way of performing work. When comparing best practices, similarity of entities is not as critical a factor as it is with benchmarking. In fact, many best practices transcend organizational characteristics.

McConnell Jones Lanier & Murphy LLP identified 16 best practices against which to evaluate the School System’s transportation operations. **Exhibit 8-2** provides a summary of these best practices. Unmet best practices resulted in an observation, which is discussed in the chapter. However, not all observations are related to a best practice.

**Exhibit 8-2**  
**Summary of Best Practices - Transportation**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
1.	Customer service procedures exist and are performed.	X		
2.	Buses are equipped with communications and video equipment.	X		
3.	Employee performance evaluations are performed.	X		
4.	Organization plans, prepares, reviews and establishes safe bus stops and routes.	X		
5.	Bus driver initial training and in-service training (also require cardio pulmonary resuscitation training) occur.	X		
6.	Accident response and accident review procedures exist and are performed.	X		
7.	Inclement weather procedures exist and are performed.	X		
8.	Fully implemented routing software exists and is used.	X		
9.	Accurate methods of mileage recording exists and are used.		X	Methods of maintaining accurate mileages are labor intensive. <b>See Observation 8-M.</b>
10.	Maintenance software exists and is used.		X	Existing maintenance software is outdated. <b>See Observation 8-J.</b>

**Exhibit 8-2**  
**Summary of Best Practices - Transportation (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
11.	Sufficient department staffing exists.		X	Recommend two additional route planners. <b>See Observation 8-B.</b> Recommend additional mechanics. <b>See Recommendation 8-D.1.</b>
12.	Targeted performance measurements exists and are used.		X	Exceptional education transportation costs are well above the national average. <b>See Observation 8-K.</b>
13.	Policies, procedures, practices exist and are performed.		X	Asset allocation practices limit management discretion. <b>See Observation 8-H.</b>
14.	Fleet replacement planning processes are in place and implemented.	X		
15.	Capital expenditures budget for fleet replacement planning process exists.		X	Inadequate to meet needs of department. <b>See Recommendation 8-I.1.</b>
16.	Fuel management and supply processes exists and are implemented.		X	Need for better internal controls at the fuel pumps. External process is appropriate. <b>See Observation 8-G.</b>

Source: McConnell Jones Lanier & Murphy LLP Review Team.

## ACCOMPLISHMENTS

### ACCOMPLISHMENT 8-A

**The Transportation Department maintains comprehensive school bus accident response procedures and has an effective crash review process.**

The safety of children on school buses is of the utmost priority in any school district. However, crashes do occur. When crashes involve the School System's vehicles, the Office of School Security responds to the scene and provides an investigation into the crash for all vehicles including school buses, administrative vehicles, and maintenance vehicles.

The investigation is conducted independently of the Metropolitan Nashville Police Department. The Security Dispatch Office, in conjunction with the dispatchers for the Transportation Department, dispatches security officers to the scene. Security officers work independently of the Transportation Department as well and provide an autonomous and impartial report of the crash. Once the School System's security officer completes the report, it is reviewed by a security supervisor and then submitted to the Metropolitan Nashville Legal Office for insurance processing and, in the event of future litigation, the Transportation Department. The Security Office maintains original copies. A copy of the report is also sent to the Vehicle Accident Review Committee.

The accident review meetings are divided into yellow fleet (school buses) and white fleet (remainder of the School System's fleet). Yellow fleet meetings are held monthly while white fleet meetings are held quarterly. The accident review committee consists of one security officer, who directs the meeting, three to four bus drivers recommended by the Transportation Department in the capacity of reviewers, and a representative of the Transportation Department, who records training recommendations and develops a plan of action for future in-service training. The reviewers evaluate the crash reports, statements, and photos to determine if the crash was preventable by the bus driver. The results are sent to the bus driver and appropriate supervisors. Additional training and/or discipline are decided within individual departments.

For the 2013-2014 school year, the Security Office investigated 277 vehicle crashes. It is important to note that for purposes of reporting, any incident, whether it is minor or severe, is reported as a crash. Of these crashes, 234 involved school buses in documented crashes. Twenty crashes involved incidents where the driver found damage but did not know where or how the damage occurred. Of the 234 investigated crashes, 110 were deemed by the accident review committee to be preventable by the school bus driver, and 84 were non-preventable. Data to conduct an analysis of the remaining 40 crashes were not available.

The School System's buses, based on a 180 day school year, traveled approximately 2,674,971 miles in 2012-2013. These represent miles traveled while students were on the bus (includes 95,883 field trip miles). To determine the number of miles between preventable accidents, a key measure of performance, total annual miles is divided by total number of preventable accidents. Therefore, 2,674,971 miles divided by 110 preventable accidents equals 24,318 miles between preventable accidents. The 2012 Council of Great City Schools median value is 103,386. The School System is 76 percent below the median value in this performance measurement.

Deadhead miles are miles traveled while students are not on the bus. They include miles incurred traveling to and from the vehicle's parked location during the day when it is not transporting students. Deadhead miles also include miles traveled before and after picking up and dropping off students.

The School System does not track deadhead miles effectively. Therefore deadhead miles are not included in the preventable accident calculation. However, deadhead miles should be tracked because they are a significant number of miles. This issue is addressed later in the chapter.

The Security Office has a standard reporting form that was last revised in June 2013. The current form is being phased out and will be replaced in July, 2014 by an improved, more comprehensive form that will allow for enhanced data capture and crash analysis.

### **ACCOMPLISHMENT 8-B**

#### **The Transportation Dispatch Center is well designed and is incorporated within the School System's Customer Service Center.**

The systemwide customer service location also houses transportation dispatch operations. This location provides for the School System's two-way bus communications on a 900 megahertz radio system that is leased from Metropolitan Nashville/Davidson County authorities. The dispatch area is divided into two functional areas that maintain communications with general education buses on one side and exceptional education buses on the other side. The radio system operates on six separate channels that allow for specific communications between the two educational groups. This configuration allows a controllable dialogue between dispatch and bus drivers. An additional split within the radio channels provides for two channels of operation for the general education population. This split is due to a higher volume of communications among these buses simply due to a higher number of buses serving general education. One channel coordinates communications with the west and south portions of the School System. The other channel coordinates communications with the east and north portions. Additional channels allow for transportation dispatchers to contact the School System's security personnel. There is an administrative channel for communications with the Transportation Department's twelve field supervisors and other authorized upper management personnel, which allows for a coordination of efforts during unusual or emergency events without interference from users of the other channels.

As Customer Service handles incoming calls from other locations as well as the public, the School System employs SPARK. This is an instant messaging software client providing communications between Customer Service and Transportation Department dispatch personnel. This service allows for simultaneous communication with dispatchers facilitating more efficiency and immediacy of appropriate responses.

All dispatch operations cover communications between 5:00 am and 5:00 pm. Transportation also has an additional full-time dispatch employee who services a majority of transportation related customer service requests. This arrangement expedites responses to the public while effectively keeping minor issues from burdening upper management. The employee works from 6:30 am to 3:00 pm.

**ACCOMPLISHMENT 8-C****Students with special needs are provided transportation services within three days.**

There are about 9,000 students with special needs in the School System of which approximately 3,000 are provided transportation on specially equipped buses with bus monitors. There is a three-day waiting period to provide transportation services to students with special needs. Operating under the mandate of the court ordered Lopez Decree (requires the School System to provide a monitor on all exceptional education buses and follow a protocol of reporting requirements that assure the order is followed), the three-day placement accomplishment in the context of the number of students served is considered a major step forward in meeting the special needs of these children.

The effort includes the designation of an exceptional education manager and a roster coordinator. The manager is responsible for the assignment of all students to buses. The manager acts as liaison with school personnel to implement mandated Individual Education Program requirements involving transportation of special needs students. The position must ensure adequate bus monitors are on staff to adhere to the Lopez Decree. The roster coordinator must, by decree, maintain all student rosters for these buses regardless of the change of information. Any change in information and assignments of students to buses must be documented. All appropriate personnel must sign a document that they have received the changes. Reviews of record keeping indicate that the School System is adhering to the criteria in the decree. Every designated special needs bus must have at least one monitor; however, more may be necessary depending on the requirements of each student's Individualized Education Program. The School System is exploring converting the current paper storage system to an electronic form – a process that is highly recommended.

**ACCOMPLISHMENT 8-D****The School System has policies and procedures that clearly define student eligibility standards for transportation services. Further, there is a description of how buses will be routed for picking up and dropping off students.**

Policies and procedures should be an integral part of any transportation program. Many school districts have significant deficiencies and difficulties meeting this standard. Too often, those that have written policies do not adhere to them consistently. Consequently, fair, equitable, cost-effective student transportation is compromised. Commendably, the School System adheres to its transportation policies and procedures. Transportation eligibility criteria include, but are not limited to the following:

- students must be legally enrolled in a system school;
- kindergarten to eighth grade students living more than 1-¼ miles from their zoned school are eligible;
- ninth to twelfth grade students living more than 1-½ miles from their zones school are eligible;
- distances are measured from the center of the student's driveway where it intersects with the public thoroughfare and along the nearest public route, meaning public vehicular route or pedestrian walkway;

- students living less than the required distances may apply for temporary transportation due to certain hardships if seats are available. The School System will not require additional stops nor have the bus deviate from the designed route nor shall it incur additional expense for these accommodations;
- buses will be routed along roadways approved by Metropolitan Nashville Government and Davidson County. Buses will only serve streets that are in excess of three-tenths of a mile in length from a main surface road and have sufficient space for the bus to reverse route at the end of the street without the bus having to backup;
- regular education buses will not travel private roadways or driveways; and
- in certain circumstances, due to federal law, special education buses may deviate from the policies for regular education due to Individualized Education Program requirements.

District school boards and school administrators across the country often make decisions to transport students that are not required by local policy or state law eligibility requirements. These decisions cause increases in transportation costs that are typically borne by the school district. In contrast, the School System strictly enforces its transportation eligibility policies.

#### **ACCOMPLISHMENT 8-E**

**The employee performance evaluation tool is well written and supports transportation employee development as well as the School System's goals.**

Employee evaluations are an important component of an employee's development. Evaluations provide a tool to recognize accomplishments while supporting employees who are not performing up to standard. The goal of performance evaluation is to retain good employees; improve an employee's substandard performance; and terminate employees who fail consistently to meet the School System's high standards. Performance evaluation goals include the following:

- ensure the quality and quantity of work performed by staff members achieves the School System's goals;
- allow for continuous open communication between supervisors and employees about job performance;
- allow for the supervisors and employees to develop a set of expectations for future performance;
- assess past performance and provide for future development of employees; and
- provide supporting documentation for pay decisions, promotions, transfers, grievances, complaints, disciplinary actions, and terminations.

All non-exempt support employees have their job performance evaluated at least annually. These evaluations are performed as required.

**ACCOMPLISHMENT 8-F**

**Maintenance operating hour revisions supporting “fast lane” services have increased vehicle availability.**

Fast lane services are available for repairs and services that can be performed quickly (generally within about 15 minutes). Previously, this service concluded early in the morning, which discouraged drivers from addressing minor problems before they became more significant problems. In addition, expanding service hours boosted productivity and increased on time school arrival. Moreover, fewer routes had to be doubled to cover for buses that were not ready for service.

**ACCOMPLISHMENT 8-G**

**Commercial fuel auditing procedures are effective at identifying potential abuse or inconsistencies in the use of fuel cards.**

The decentralization of fleet staging led to the development of a commercial fueling strategy. The School System contracts with a vendor to provide fueling services at a variety of commercial facilities across the metropolitan area and throughout the region. Drivers are issued an access card for which they are personally responsible. The card is limited to the purchase of the designated fuel type (diesel or gasoline) for the type of vehicle the driver typically operates. Some supervisors and support vehicle drivers are allowed to purchase multiple fuel types and car washes using the fuel card; however, this group is limited. Drivers with such cards must submit receipts and are subject to discipline for non-compliance.

The department has developed a weekly reconciliation process for these transactions that matches transactions to receipts submitted by drivers. This process identifies individuals who have not submitted receipts and individuals who have had five or more fueling transactions in a week. These are both sound processes to address both accountability and any potential abuse in the system. Later in this report, we discuss the inability to integrate fuel transactions with the fleet management information system.

**DETAILED OBSERVATIONS****GENERAL OPERATIONS****OBSERVATION 8-A**

**The Transportation Department’s budget is not reimbursed for athletic and curriculum based trips.**

The Transportation Department provides transportation for athletic events and fieldtrips. Expenses for these trips are not reimbursed to the Transportation Department budget but instead are deposited into the General Fund. Transportation is not funded to cover these costs thereby causing a shortfall in the Transportation budget.

Transportation, according to a report from the trip management software (Transportation Operations Manager) provided for 1,722 trips in 2012-2013 to the School System schools and programs that cost \$418,585 in vehicle and personnel costs. The School System's field trip policy states that many of these trips are paid for by the school taking the trip. There are additional resources as in Pencil Partners and Parent Teacher Organizations that also cover the costs of trips. However, the Transportation Department does not receive the funds into its account. **Exhibit 8-3** shows details and expenses from the trip report:

**Exhibit 8-3  
Metropolitan Nashville Public Schools' Field Trips  
2012-2013**

Fund	Number of Trips	Number of Students	Number of Adults	Total Number of Passengers	Total Hours	Total Miles	Total Amount of Trip
Athletic/Band	81	6,130	561	6,691	34	6,620	\$31,003
Athletic/Basketball	3	109	6	115	4	209	\$549
Athletic Football	43	2,424	235	2,659	12	1,595	\$9,058
Next Feeder School Visits	55	5,653	329	5,982	321	1,018	\$12,939
Lifeskills/Special Education	5	73	29	102	15	102	\$732
Christmas Parade	14	1,174	57	1,231	0	770	\$4,508
Regular Field Trips	1,520	127,304	10,824	138,128	8,014	85,539	\$359,602
Veteran's Day Parade	1	50	2	52	0	30	\$194
<b>Report Totals</b>	<b>1,722</b>	<b>142,917</b>	<b>12,043</b>	<b>154,960</b>	<b>8,400</b>	<b>95,883</b>	<b>\$418,585</b>

Source: Metropolitan Nashville Public Schools' Transportation Operations Manager's field trip report.

The School System's departments are required to submit, manage, and stay within a board-approved budget. Each department that provides a service to other areas of the School System should be reimbursed for services provided. For the Transportation Department, this is evidenced by the field trip policy that details charges for trips so that requesting schools and programs can budget for the expense. **Exhibit 8-4** presents the charges a school, department, or program can expect to reimburse the Transportation Department:

**Exhibit 8-4  
Metropolitan Nashville Public Schools' Field Trip Costs**

Field Trip Type	Initial Costs	Additional Costs
Regular	\$120 per hour for first three hours	\$33 per hour for each additional hour
Band and football	\$161 for the first five hours	\$33 per hour for each additional hour
Summer time trips	\$125 for the first three hours	\$33 per hour for each additional hour

Source: Metropolitan Nashville Public Schools' field trip policy.

**RECOMMENDATION 8-A.1**

**Reimburse the Transportation Department budget for expenses related to field trip expenditures.**

The business/finance department and operations department should collaborate to explore the accounting and operational requirements to support the justification for this observation. The department heads should develop accounting procedures to ensure the transportation department is reimbursed for expenses, per the School System's policy, when providing services to other departments, schools and programs.

### **FISCAL IMPACT**

The School System can implement these recommendations with existing personnel. The financial impact affects the Transportation Department only and will vary year to year depending on the number of trips completed and changes in trip charges. The financial impact is positive for the Transportation Department as the costs of these trips would no longer be borne by the Department. However, there is no impact on the School System as a whole because the charges are transfers from one department to another.

### **OBSERVATION 8-B**

#### **The School System is understaffed by two route planners.**

The School System has two full-time employees providing route planning for regular education and a vacant position for one full-time route planner for students with exceptional needs. Route planning, a complex, multifaceted transportation discipline, is one of the most critical components of an efficient and effective school bus routing system. Students, stops, times, vehicles, speeds, bell times, and hazardous conditions, must be managed, monitored, and kept in balance. The ultimate goal of route planning is to operate a bus at the highest possible capacity within a given routing window and to reuse it on multiple routes (route pairings) to achieve maximum efficiency.

Requests for stop changes typically come through school administration to the Transportation Department. The School System uses PowerSchool™ for its student information system. Downloads of adds, drops, and changes of students in the routing software occur weekly over the weekend. PowerSchool™ does not provide for validation of addresses prior to entering into Edulog™. Consequently, when school personnel enter information incorrectly, it remains incorrect unless the error is brought to the school's attention by transportation personnel. This lack of validation requires transportation personnel to verify address information manually to match the geocoding records within Edulog™. Accurate information is critical for effective routing of students to their destinations.

Exceptional need student routing lacks automated entry of student information into Edulog™ from PowerSchool™. Students with exceptional needs often have multiple levels of information that are student-specific based on a student's Individualized Education Program. Student information is manually entered into the routing system from information provided from HELPSTAR™, the School System's help desk software. This information is loaded from the Exceptional Education Department into HELPSTAR™ software, which is then manually transferred into Edulog™. Manual entry of this information is a time consuming task. However, the entry of this information is critical to ensure that School System bus drivers, bus monitors, and emergency personnel have up-to-date medical information about allergies, medications and disabilities.

Many regular education routes are fairly static year to year. Department route planners work within a three-tier routing structure meaning that up to three routes could be assigned to a bus in both morning and afternoon deployments. Planners now have a 55-minute routing window, which is up from a 45-minute routing window in the past. This increase allows the buses to run longer and gain higher capacities thereby increasing opportunities for efficiencies. However, as changes in student and stop assignments occur routes can become less efficient over time. Therefore, routes must be reviewed regularly to assess the impact of changes affecting capacity utilization, time of routes, and additional utilization of buses.

Route planners say that they stay within the parameters of the School System's policy to maintain efficient bus routes. Street corners take priority as bus stops in consideration of safety as students walk from home to the stop. When additional stops are requested, a team, including transportation leadership and school security, are directly involved in reviews for determination of the safety of the proposed stop. However, transportation staff indicate that there is no formal, documented process.

There is a process of notification when stops are added to any route that does not change the timing by more than two minutes. Planners inform the field supervisors of the changes who in turn notify the drivers who then notify the students. Parents are notified by letters sent to their home if the stop time change is more substantial or stops move to another bus. Students are advised of School System policy that they should be at the bus stop ten minutes prior to scheduled time.

Route planners also provide for routing of after-school activities that include individual stop assignments for students. Schools provide the Transportation Department with a list of students involved in after-school activities. However, the list includes all students participating in the activity, not only the students requiring transportation.

The 2012 Council of Great City Schools median performance measurement is 88 buses per route planner. The School System has 480 regular and 202 exceptional education buses. **Exhibit 8-5** demonstrates that the School System is understaffed by five route planner positions when compared to the Council of Great City School's standard of 88 buses per route planner.

Given recommendations elsewhere in this report, we believe the School System should proceed systematically to address the comparative route planner differences between the Council of Great City School's standards and the School System's current staffing. Likely efficiencies in the planning process available with improved use and availability of technology resources do not justify the hiring of five additional planners. Therefore, the School System should fill the vacant exceptional needs route planner position and one of the regular bus route planner positions initially and then reassess any additional capacity requirements after the technology recommendations have been fully addressed.

**Exhibit 8-5  
Route Planners per Number of Buses**

	<b>Total Metropolitan Nashville Public Schools' Buses</b>	<b>Recommended Route Planner Positions (Total Buses/Great City School's standard of 88)</b>	<b>Current Route Planner Positions</b>	<b>Route Planner Positions Needed</b>
Regular Buses	480	6	2	4
Exceptional Education Buses	202	2	1	1
<b>Total</b>	<b>682</b>	<b>8</b>	<b>3</b>	<b>5</b>

*Source: Metropolitan Nashville Public Schools' Transportation Department and Council of Great City Schools 2012.*

**RECOMMENDATION 8-B.1**

**Fill the vacant exceptional needs route planner position, and hire one route planner for regular education and one route planner for exceptional education.**

Route planning for exceptional needs students requires significant individual attention to student records due to Individualized Education Program requirements. The individual attention adds to the significant additional personnel time required to route this group of students as compared to regular education students. With the additional route planning for after school activities beyond the day-to-day school bus routes, students not needing transportation should be excluded from after-school activity list and only those students who require transportation should be included on the list. School staff should poll students attending after-school programs to obtain the number of students who require transportation. Only those students should be reported to the Transportation Department for routing.

**FISCAL IMPACT**

Based upon the salary ranges of the existing route planners, the total salary of two additional planners would be \$83,100 calculated as \$41,550 per planner times two, and is exclusive of benefits. The \$41,550 is the average of the current route planner's salaries.

**FLEET MAINTENANCE AND MANAGEMENT**

Maintenance and repair functions account for the overwhelming majority of fleet-related activities and associated costs. Such functions include vehicle and equipment maintenance and repair and developing, implementing, and evaluating preventive maintenance programs. Duties also include assigning and monitoring demand repairs brought to the shop, managing technician resources, managing outsourced repairs, ensuring shop safety, and communicating with customer organizations. These functions consume the majority of fleet resources and have the immediate, direct impact on the overall success of a fleet services organization. Next to fueling, customers use maintenance and repair services most frequently. Compared to the capital cost of fleet units, maintenance and repairs account for the majority of fleet costs. An organization cannot be a high-quality and low-cost provider of fleet services without having a cost-effective and high-quality maintenance operation.

**OBSERVATION 8-C**

**Parts management processes provide for the proper recording of transactions, but the function is understaffed, and technology availability is inadequate.**

Parts management is a distinct function within the fleet maintenance operation. One employee is primarily responsible for managing, ordering, receiving, and stocking parts inventory. The individual has significant expertise as a technician and parts manager. The employee manages all parts for both the school bus and the support vehicle fleet. The number and diversity of parts complicates the Transportation Department's management responsibilities. However, the employee has managed effectively despite the absence of technology systems to support parts management.

Supplies and materials are mostly purchased using blanket purchase orders with local vendors or via a quoting system from multiple vendors. Given the comparatively unique demands of the school bus fleet, there is also a substantial volume of ordering directly from original equipment manufacturers. There is no systematic tracking of non-stock (demand buy) items due to the technical limitations of the existing fleet management information system. Stocking levels and reorder points are established based purely on subjective judgment and prior experience.

Technicians have access to the parts room to obtain parts. This is important because parts would otherwise not be available to them when they are scheduled to work. There is a general process that requires a part to be identified and recorded for the parts manager to charge to a specific work order. When parts must be ordered, the parts manager is responsible for sourcing and managing the order. When received, the part is directly charged to a work order without passing through inventory. The exceptions to this ordering procedure include bulk fluids such as oil and fuel that are managed by the manager of Fleet Operations.

The department has recently reconfigured the physical space associated with parts storage. This reconfiguration included a major effort to identify and dispose of obsolete inventory. The additional space has allowed for some, but not all, materials to be brought into the parts room. A number of bulk items remain unsecured from the parts room including items such as tires. Upholstery items necessary for seat repairs are also stored in the parts room but are managed by the technician responsible for seat repair.

As is detailed in the Technology Availability and Use section of this report, technology support for parts operations is inadequate. The system provides for the basic recording, parts use, and association of use with specific work orders. However, there is limited functionality within the system to manage the entire ordering process. For example, the process to establish minimum and maximum stocking points to facilitate the ordering process is deficient. Additionally, the reporting is rudimentary and difficult, and the development of customized reports that would allow for the export of data for further analysis is limited.

**RECOMMENDATION 8-C.1**

**Invest in a fleet maintenance management system with a robust inventory management module, which is critical to repair parts cost control and inventory management.**

The lack of regular controls, including the inability to assess optimal minimum, maximum, and reorder points, limits the opportunities to assess the efficiency and effectiveness of ordering practices, stocking procedures and management. Existing procedures generally include a large volume of paper-based record keeping. The lack of technology support results in a process that is overly reliant on the knowledge and experience of a specific individual or group of individuals. In addition, the lack of control mechanisms, such as periodic or annual inventory counts, prevents a full and complete accounting and auditing of this function.

The lack of an automated inventory management system within an organization of the size and scope of the School System increases operational and financial risk. The significant dollar and transaction volumes that occur, particularly in the parts area, necessitate a structured approach. There should be appropriate technology support to ensure that repair parts are available when required and that such parts have been acquired at the most advantageous prices and are properly accounted for in their use. The goal of a repair parts inventory management system would be to improve the quantity and quality of data available to evaluate, manage, and control a variety of inventory management activities including:

- determining whether or not to stock specific parts and commodities;
- establishing inventory minimum, maximum, and reorder points;
- identifying and disposing of obsolete inventory;
- measuring performance; and
- accounting and record-keeping procedures for receipt, storage, and disbursement of goods.

Many public sector fleet operations question the need to establish and perform many of the basic inventory control functions used in the private sector. However, the large-dollar volume of parts transactions (approximately \$1,800,000 in Fiscal Year 2013) and the disparate and often expensive items required to support a fleet such as the School System's more than justifies the implementation of formal inventory control systems and procedures. The systematic and coordinated implementation of an inventory management information system would greatly improve the department's ability to control and audit the parts supply function.

#### **FISCAL IMPACT**

There is no additional incremental cost to the implementation of the recommendation beyond the system costs identified in **Recommendation 8-J.1**. Staff training on the use of the module should be included in the overall system cost.

#### **RECOMMENDATION 8-C.2**

**Develop inventory management procedures to guide the decision making process relative to stock and non-stock parts and operational practices.**

The identification of the parts to be kept in stock involves analyzing the timing of parts usage, parts and parts supplier performance, and parts accessibility from local vendors. Determining proper inventory size and composition requires an understanding of cost trade-offs between volume and individual

purchases, the impact of inventory carrying and parts delivery costs, and the operational implications of parts availability and delivery times. It also requires identifying inventory items that have become obsolete due to changes in fleet composition and that no longer should be replenished. Inventory control involves the tracking and physical control of parts from the point of receipt through consumption.

The parts supply function currently operates in the absence of established guidelines that would assist in determining the most appropriate and fiscally responsible mix of stock and non-stock parts and materials. Existing shop management generally has complete discretion over the type and volume of items that are retained in inventory. While this discretion is informed by a long history of technical and practical skills and experience, it is highly dependent on individuals rather than a systematic process that would be readily transferable between staff. The department should capitalize on existing expertise to establish reasonable procedures and formula-based approaches to inventory management. This would include developing policies for inventory stocking parameters and reorder points that are consistently applied to all items. An example would be a policy that requires an item to be used four times per year before it can be added to stock. Once in stock, the policies should establish how many to keep based on its cost and frequency of use.

Over-investment in inventory is costly for several reasons. First, funds expended on inventory represent real cost for which no benefit has yet been derived since the parts have not been used on a fleet unit. Once inventory has been purchased, there is also a cost associated with maintaining that inventory. This cost, referred to as inventory carrying or holding cost, is incurred because it requires space to store, poses a risk of loss that must be insured through a risk management fund, ties up capital that could be used elsewhere, and is faced with loss due to obsolescence, damage, pilferage, or other reasons.

### **FISCAL IMPACT**

This recommendation can be implemented with existing resources and can begin immediately. Staff time to analyze parts use history to determine appropriate stocking levels and document recommended procedures would be the primary resource required for implementation.

### **RECOMMENDATION 8-C.3**

#### **Assess current stocking levels and establish and maintain bids and formal contracts for all parts procurement.**

The functionality of the current fleet management system limits the ability of the department to systematically assess the number of individual line items and the volume of individual parts retained in inventory. Assessing the value of the inventory and the appropriateness of the purchasing methodologies cannot be conducted without a more complete evaluation of the number and types of both purchase and use transactions. The availability of a more robust transaction management system as part of a broader fleet management package would allow for a detailed assessment of inventory volumes.

The assessment of volume should address the most effective method of procurement for repair parts and supplies. The department has a number of part bids and contracts and makes aggressive use of interagency agreements for its procurement practices. However, the majority of parts and supplies are

acquired using blanket purchase orders that lack designated pricing targets or volume discounts. While establishing and maintaining formal contracts or blanket agreements for the majority of part requirements is time consuming and complex, it is the only practical method available to ensure that competitive pricing and overall service is being obtained on all part purchases.

A systematic and coordinated approach to parts contracting is necessary to get this result. The industry is structured such that many different pricing levels are available depending on the importance of the customer's business and the quality of its contracting methods. In order to garner the best possible pricing, the department should develop a formal process of parts contracting that considers the following factors:

- **Price versus total cost** – When developing contracts, it is important to keep in mind that the lowest price does not necessarily translate into the lowest cost. Rather, the School System must consider vendor service, location, delivery availability, and other similar factors when making purchasing decisions.
- **Price across product lines** – Sometimes, getting the lowest price on product “A”, product “B” and product “C” individually does not translate into the best price on product “A, B, and C” combined. Bundling products together on a single contract may mean a higher price on certain items in order to garner the best price for the overall group of items.
- **Logical grouping of product lines** – In general, the largest volume that can be concentrated with a single vendor will yield the best possible overall price and service combination. Given the diversity of equipment in the fleet, it will be impractical to concentrate all purchases with a single or even a small group of vendors. Nevertheless, the School System should strive to group product lines together to the extent possible in order to limit the number of vendors from which it is purchasing.
- **Service-based specifications** – Finally, the School System should recognize that service quality from its vendors is equally important to price. Parts contract specifications should incorporate expectations associated with product availability, delivery time requirements, account management, and other service oriented issues.

The diversity of vehicles and parts in the department's fleet represents a significant challenge for the effective management and control of parts inventory. The development of an acquisition strategy supported by logical policy statements and analysis from a well implemented inventory control system will promote increased vehicle reliability and reduce the cost of services.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources and can begin immediately. Staff time to analyze parts use, count and document existing inventory values, and determine appropriate stocking levels would be the primary resource required for implementation. This recommendation should be implemented concurrent with the activities in **Recommendation 8-C.2**.

**RECOMMENDATION 8-C.4****Acquire and implement an effective fleet management information system and develop a parts contracting process.**

The acquisition of an effective parts management module will come as part of the overall process of acquiring a fleet management information system. However, it will require the development of specific parts management criteria for use in the solicitation document. These efforts could be completed at any time prior to the release of the solicitation. It is expected that this would require approximately two weeks of staff time.

The development of a parts contracting process is a longer term goal and would be far better supported after the acquisition of a fleet management information system. After a limited period of use, the department would have sufficient transaction data to fully evaluate the use of particular product lines and the volume of purchases from designated vendors. Once this material is available, the department can establish the market-basket of products that would allow for the best value proposition for purchasing. It is expected that this process could not begin until approximately six months after the new system is fully implemented.

**FISCAL IMPACT**

While there will be no additional incremental costs to acquire the parts management component of the fleet management information system, it is likely that incremental training would be required. One-time training costs are estimated to be approximately \$5,000 based upon four days of training at an average rate of \$1,250 per day. The fiscal impact of revised parts procurement practices cannot be reasonably estimated until improved data collection processes are established. Given the longer term nature of this recommendation, it would be at least two years before there was any fiscal impact of this type of change.

**OBSERVATION 8-D****Maintenance staffing and the established shift schedules are inadequate to support the current inventory of vehicles.**

The number of technicians required is dictated by the size, composition, and condition of the fleet it serves. An approach known as vehicle equivalent unit analysis is used to equate the level of effort required to maintain dissimilar types of vehicles to a common basis of comparison. A standard administrative sedan is given a baseline vehicle equivalent unit of 1.0. Work with other fleet organizations has shown that a vehicle equivalent unit of 1.0 consumes between 10 and 15 annual maintenance labor hours, depending on fleet condition. All other types of vehicles are allocated a vehicle equivalent unit value based on their relationship to an administrative sedan. For example, a police squad car is given a vehicle equivalent unit of 3.0. This means that a squad car requires three times the annual maintenance effort of a passenger car, or between 30 and 45 hours per year.

A vehicle equivalent unit value assigned to every unit in the School System's inventory results in a fleet total of 3,310 vehicle equivalent units. With this number the review team was able to evaluate the appropriateness of the current mechanic staffing level.

The standard American work week is 40 hours, or 2,080 hours per year (52 weeks x 40 hours per week). The actual hours available for productive labor are reduced by vacation, sick, and other paid time off. These reductions result in approximately 1,600-1,700 available work hours per year. Using these two factors, the review team estimated the number of technicians required relative to the total available. **Exhibit 8-6** illustrates the staffing requirements:

**Exhibit 8-6  
Vehicle Equivalency Unit Evaluation**

Labor Component	Full-time Equivalent Positions	Hours
Available: 11.0 full-time employees at 1,600 available hours	11.0	17,600
Requirement: 3,310 vehicle equivalent units at 10-15 hours per vehicle equivalent units	20.7 – 31.0	33,100 – 49,650
Capacity excess / (shortage)	(9.7) – (21.0)	(15,500) – (32,050)

*Source: United States Air Force Vehicle Equivalency Unit Rating.*

As the exhibit indicates, the current complement of 11.0 full-time equivalent technician positions is approximately one-half the number of positions required to cover the service demands of the fleet. It should be noted that the analysis above assumes that all paid time off hours (sick, vacation, and personal days) are used by all personal, and that all available hours are put to productive use.

It would be preferable to evaluate the actual productive output of the technicians in order to further evaluate the adequacy of current staffing levels. However, the current data and collection methodologies are inadequate to provide an accurate portrayal of actual productivity. This fact and the above analysis illustrate the need to improve the use of information technology as discussed below.

The presence of a single shift in the fleet maintenance operation is further limiting the effectiveness of the maintenance program. Fleet maintenance services are most effective when they can be provided while vehicles are not in service, as the recent “fast lane” experience has demonstrated. Allowing for the provision of preventive maintenance and repair service during off hours generally results in higher rates of vehicle availability and a lower ratio of the number of spare buses required. However, the decentralized nature of vehicle domicile procedures greatly complicates off-hour operations because of the need for transport from and to the service center in those off-hour periods. Further analysis of maintenance costs and out of service rates is required to determine whether consideration of a second shift is a reasonable option.

#### **RECOMMENDATION 8-D.1**

##### **Provide additional staffing resources to the maintenance operation.**

Industry guidelines indicate that the department is significantly understaffed given the size and composition of the current fleet. The limitations of the current fleet management information system prevent a detailed assessment of current productivity levels to determine the number of additional technicians required. However, it is clear that additional staffing and a revised shift schedule would allow the maintenance operation to be increasingly responsive to the needs of an older fleet.

Assuming the department is able to support a more aggressive replacement schedule, the most reasonable approach would be to incrementally increase technician staffing while also realigning work

hours. Given a baseline requirement of approximately nine new technicians, the addition of as many as five additional technician positions should be considered immediately. This would allow for the employment of a range of technician types including light duty specialists to support the fleet and heavy duty specialists to support school bus maintenance. Additionally, this would provide a sufficient base of staff to support a second shift operation that would allow for buses and other fleet vehicles to be serviced when they are not being used.

The employment of additional staff would be a relatively straight forward effort that would follow existing School System hiring procedures. Given the training and in-servicing demands of any staff member, it would be valuable to create at least two and possibly three groups of employees that are hired at something approximating 60 day intervals.

### FISCAL IMPACT

Based on a recent bid prepared on another engagement, we estimate an average cost of \$41,000 annually for salary costs excluding benefits. Eleven additional positions would represent \$451,000 in additional expenditures when all positions are filled. It is both operationally preferable and fiscally responsible to phase any new positions in over time. Assuming an implementation schedule of three positions per year for three years and two positions in the final year, the fiscal impact is displayed in **Exhibit 8-7**. The exhibit ignores the effect of salary inflation.

**Exhibit 8-7  
Additional Mechanic Costs**

New Positions (Carryover positions)	2015-2016	2016-2017	2017-2018	2018-2019
3	\$123,000			
3 (3)		\$246,000		
3 (6)			\$369,000	
2 (9)				\$451,000

*Source: School Bus Consultants, LLC; Metropolitan Nashville Public Schools' Payroll report, 2013.*

### OBSERVATION 8-E

**The Transportation Department's preventive maintenance program is not robust enough to meet its needs.**

The preventive maintenance program is designed with a three-tiered or echeloned structure, using A, B, and C service levels that increase from a basic lubrication and general inspection (Level A) to an intensive full service of the chassis and mechanical subsystems (Level C) over the summer. Checklists for each service level have been established but are generic. Details are provided at the most basic level feasible.

Detailed manufacturer recommended maintenance procedures and sub-unit maintenance cycles have been generally integrated into the overall preventive maintenance procedures for each type and model vehicle. However, specific repair procedures, intervals, and sequences have not been tailored to specific

vehicle types. This basic structure is driven by the limited number of staff available to perform the procedures. The competing time demands prevent the development of an extensive service array. Given the limited reporting capabilities of the School Transportation Information Management System, it is not possible to effectively evaluate the impact that a more aggressive schedule would have on costs.

### **RECOMMENDATION 8-E.1**

#### **Expand the scope of the preventive maintenance program.**

The need for a robust preventive maintenance program is particularly acute when fleet replacement programs have been underfunded in current and historical operations. Well designed and implemented preventive maintenance programs allow the fleet maintenance technicians to recognize and correct problems before they become expensive and cause disruptive breakdowns.

A multi-tiered program built on manufacturer's recommended service intervals that are based on both mileage and time will ensure that vehicles continue to be cost effective, safe, reliable, and environmentally responsible to operate. Expanding the current program to proactively service component and subsystem failures that are inherent in older units would reduce vehicle downtime and improve the ability of the department to effectively allocate resources across the organization.

The key to ensuring that any newly designed program is effective is to establish a rigorous methodology for scheduling, monitoring, and enforcing compliance with the program. Additionally, preventive maintenance programs should be thoroughly documented including the services to be performed and the procedures to be followed.

The scheduling and documentation process must be supported by a high-quality information system that has capabilities currently unavailable in the School Transportation Information Management System. The system should provide work orders that detail the services and procedures necessary to be performed at each interval. It is important that the system also provide department staff with information regarding compliance rates that can be used to monitor and enforce program participation. In addition, the system should maintain service hours and procedures to support the scheduling of services and the rescheduling of missed appointments. This is particularly important with the decentralized nature of the department's workforce and vehicle domicile.

The enhancement of the preventive maintenance program should, as indicated, be preceded by the acquisition of an enhanced fleet management information system. As part of the implementation of the new system, the department would evaluate the additional services that could be added to the preventive maintenance schedule to address known issues that have been occurring. Following this setup, the system would be able to generate service checklists that could be provided to technicians who have been assigned to provide these services.

### **FISCAL IMPACT**

This recommendation can be implemented with current staff at no additional incremental costs.

## **FUEL MANAGEMENT AND SUPPLY**

Fueling is one of the simplest but most critical components of the fleet operation. Fuel management includes monitoring fuel inventory levels, capturing and analyzing utilization data, evaluating fuel efficiency to identify possible maintenance issues, administering accounts receivable from users, managing user access, and ensuring the security of fuel sites and inventory. The use of commercial fueling operations necessitates a rigorous and structured audit and data management process so that accounts payable and accounts receivable balances are reconciled timely and accurately. Additionally, controls on the commercial fueling process must be established to ensure that appropriate data is captured and transferred to the fleet maintenance operation to support the scheduling of preventive and other maintenance services.

### **OBSERVATION 8-F**

#### **The availability of useful fueling data is limited by the setup of the commercial fueling card.**

The decentralization of fleet staging led to the development of a commercial fueling strategy. The School System currently contracts with Wright Express to provide fueling services at a variety of commercial facilities across the metropolitan area and throughout the region. Drivers are issued an access card for which they are personally responsible. This card is limited to the purchase of the designated fuel type (diesel or gasoline) for the type of vehicle the driver typically operates. Some supervisors and support vehicle drivers are allowed to purchase multiple fuel types and car washes using the fuel card. This group is very limited. Drivers with such cards are provided with receipt submittal requirements. They are advised of disciplinary procedures in the event of non-compliance.

The department has developed a weekly reconciliation process for these transactions that matches transactions to receipts submitted by drivers. This process identifies individuals who have not submitted receipts and individuals who have had five or more fueling transactions in a week. These are both sound processes to address both accountability and any potential abuse in the system. Earlier in this report, this process was cited as an accomplishment.

The primary concern with the current commercial fueling approach is the inability to integrate fuel transactions with the fleet management information system. Not all of the fuel cards issued require the entry of an odometer reading in order to obtain fuel, which limits the ability of the department to use this data for maintenance scheduling or management purposes. However, even if the system did capture odometer readings, the School Transportation Information Management System is not designed to allow for the import of that data such that it could be used for scheduling maintenance services. This basic functionality is inherent in every modern fleet information system.

### **RECOMMENDATION 8-F.1**

#### **Revise fuel management procedures to improve data available for maintenance services and analysis.**

The current data capture procedures should be revised to require all users of the commercial fueling card to enter an odometer or hour meter reading unless the equipment is specifically exempted. This structure should ensure that standard data validation practices are in place to ensure that the value entered:

- is not less than the previous value;
- does not include invalid readings such as 00000; and
- is not abnormally high or low for that particular unit (e.g., not more than 500 miles greater than the previous value).

The Wright Express system is used by many municipal fleets, including the Metropolitan Nashville Government, and commercial fleets while permitting of the functionality described above. Instituting these requirements may limit the fueling stations employees can use because it will be necessary to use only stations with the technical infrastructure on fuel pumps to support these requirements. However, the availability of this readily auditable data would substantially outweigh any minor inconvenience imposed on staff. After odometer data is validated, the department should work towards a process that allows for the uploading of fueling transactions into the fleet maintenance management system. This upload would provide a more complete understanding of the total cost of ownership, support preventive maintenance scheduling, and identify vehicles whose average fuel economy has changed, which may be an indication of underlying maintenance concerns.

The transition to a more robust commercial fueling strategy should be relatively simple from a technical perspective but will likely require enhanced employee training in the new procedure. Staff would be required to research the number of locations where fueling has occurred that could not support the new procedure and identify the feasibility of alternate sites for those staff. Training would then need to be provided regarding the importance of entering accurate meter readings at each fueling station. Finally, staff would need to be available to address instances involving cards that were invalidated due to incorrect meter reading entries. These instances would serve as an opportunity to reinforce the importance of proper data entry.

### **FISCAL IMPACT**

The primary cost associated with a revision to the commercial fuel management process is administrative. The School System would not incur any additional costs to use this functionality in the Wright Express network. However, limited administrative effort would be required to address issues of incorrect meter entries resulting in cards being denied and in training employees on the new process.

### **OBSERVATION 8-G**

#### **Internal fuel management controls require improvement.**

The School System uses a combination of fuel management techniques to support its decentralized bus driver workforce and a more centralized support services workforce. The first technique is a School System-owned fueling station located at the primary transportation maintenance center. There are two fuel tanks at this location. One is a 5,000 gallon gasoline tank and one is a 10,000 gallon diesel tank. Each of the pumps remains under lock and key and must and can only be opened by a transportation or maintenance supervisor.

The fleet manager manages in-house fueling. This individual is responsible for reviewing the reports for the automated tank monitoring system to ensure that there are no leaks. The employee is also responsible for ensuring compliance with state and federal inspection requirements and ordering fuel.

Fuel ordering occurs on an as needed basis using traditional bidding processes. Competitive bidding is appropriate for a fueling operation of this size and scope.

Transactions at the fuel depot are recorded on a log sheet located at the pump. There is no auditing process to ensure that all transactions are recorded. Additionally, there is no systematic process in place to transfer fueling data into any centralized system for purposes of fuel management. This deficiency is partially due to the inadequacies of the current fleet management information system and the nature of the manual system that is maintained.

### **RECOMMENDATION 8-G.1**

#### **Review existing onsite fueling services to determine whether a modernized fuel management system is warranted.**

The fuel system as currently configured is appropriately controlled to prevent abuse, but it does not effectively support secondary processes such as maintenance services. Acquiring a modern fuel pump management system would allow the capture of key transaction and maintenance-related data to support vehicle management and maintenance operations.

This data could be used for analyses such as the following:

- fleet sizing (Are there too many, too few or the right number of support vehicles?);
- systemic abuse (Are certain employees fueling at a rate and at a volume that indicates a negative impact on productivity?); and
- material ordering (Could the system get better pricing for fuel using an alternative to the current approach?).

Each of these analytical efforts has the opportunity to avoid cost and to reduce marginally near-term costs through more effective fleet management. While the cost of automated systems vary, it also may be possible to piggyback on existing contracts used by the Metropolitan Nashville Government in its fleet management operation. This would alleviate the burden and cost of the research, specification development and solicitation, and implementation costs associated with this type of product.

The decision to upgrade the on-site fueling facility would involve a more long-term project. Initial research could be conducted by staff in conjunction with Metropolitan Nashville Government fleet management staff to determine the feasibility of sharing contracts used for fueling infrastructure. If this option does not prove feasible, it would be necessary to develop competitive solicitations for fuel pump infrastructure. There are a number of these available publicly that could be reviewed and modified for use by the public system. It is estimated that this process would require approximately 18 to 24 months to implement.

### **FISCAL IMPACT**

The acquisition of improved fuel management technology and infrastructure for the onsite fuel location would require both one-time and ongoing expenditures. However, the magnitude of those expenditures is difficult to estimate until the method of acquisition is chosen. If the option to use existing Metropolitan Nashville Government contracts is available, that is likely to be far less expensive than the

one time purchase of this equipment due to the volume discounts likely to be received. Ongoing maintenance and software licensing costs would also be required if the infrastructure were upgraded.

## **FLEET MANAGEMENT**

One primary goal of every fleet management program is to provide a suitable and reliable fleet of vehicles in a cost-effective manner. Effective fleet management includes developing specifications for new and replacement vehicles, planning and managing the acquisition and disposal of fleet assets, managing vehicle licensing and titling procedures, monitoring vehicle and equipment utilization, risk management, and ensuring regulatory compliance.

Capital replacement policies are the cornerstone of a fleet replacement program. Such policies are normally expressed as the age and/or mileage at which a particular class or type of equipment will be targeted for replacement. To be effective, these criteria should be reflective of several contributing factors, which include the following:

- economic tradeoff between capital and operating dollars;
- inherent useful life for the class of equipment;
- severity and type of use to which the class will be subjected;
- actual and/or perceived reliability of the class as it ages; and
- other qualitative factors, such as the importance of visual appearance, specific to a particular group that operates the class.

Although there should be flexibility provided within the constraints imposed by these criteria to shorten or extend the operational life of individual fleet units when justified by that unit's operating costs and relative reliability. This "repair versus replace" decision-making process forms the tactical component of the fleet replacement program. It provides additional structure and detail to the entire process.

### **OBSERVATION 8-H**

**The Transportation Department's vehicle allocation practices limit management discretion.**

The assignment of a vehicle to a driver is a critical management control concern related to the balancing of fleet utilization. The fall 2012 Procedure and Driver's Manual clearly indicates that the assignment of new buses is at the discretion of the board of education. However, it also provides for an allowance where new buses will be allocated based on a combination of seniority and current bus age and the creation of a joint management and work force committee related to fleet assignment. The manual does not provide for any procedure to detail the reassignment of an existing bus to better balance utilization.

### **RECOMMENDATION 8-H.1**

**Remove bus assignment procedures from the 2011-2012 Driver's Manual and assign as a management responsibility.**

Controlling asset allocation is a key element of cost control for any fleet organization. The fleet manager and executive director of Transportation should have sole discretion and accountability related to the allocation of vehicles such that it promotes the most advantageous cost and operational structure for the School System. Departmental standard operating procedures should be established to guide decisions regarding allocation strategies. Such procedures should consider vehicle age, mileage, and operating conditions. Employee groups should be encouraged to participate in the development of these procedures, but once established, authority and responsibility should reside solely with management and not with an advisory committee.

### FISCAL IMPACT

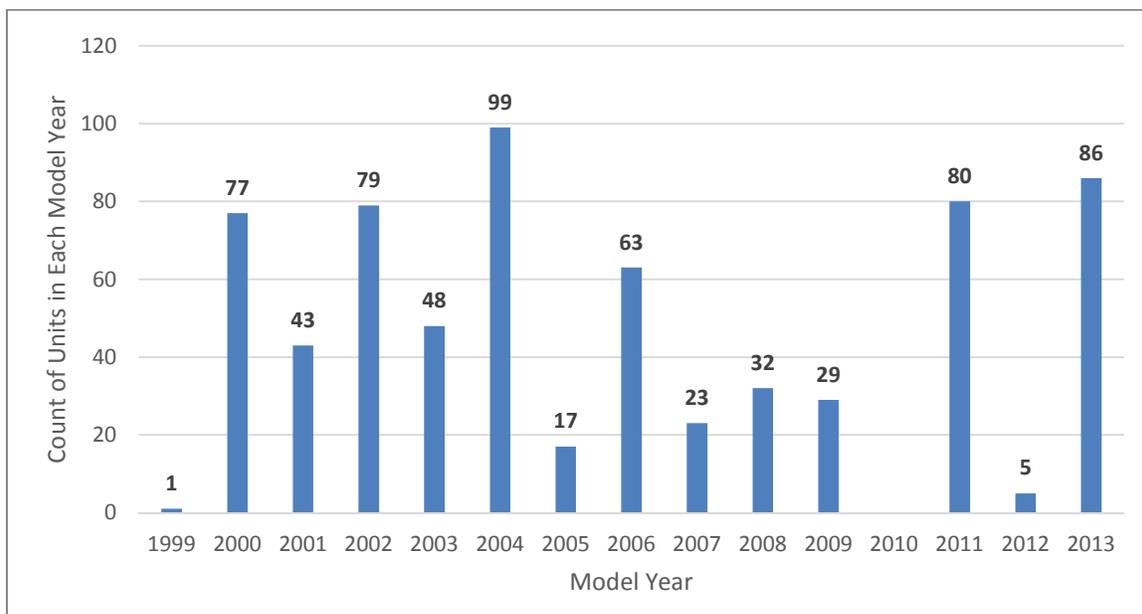
This recommendation can be accomplished with current staff at no cost.

### OBSERVATION 8-I

**The funding process has not allowed for the timely replacement of vehicles consistent with established schedules.**

The School System has traditionally used cash financing to acquire all vehicles in its fleet. This practice has resulted in an ad hoc approach to vehicle replacement driven primarily by resource availability rather than a disciplined approach to vehicle replacement. This fact is clearly evident when analyzing the average age and mileage of the vehicle fleet. The average age of the School System's buses is 7.6 years and about 125,000 miles. These numbers are above common industry guidelines. **Exhibit 8-8** indicates the distribution, by model year, of the School System's buses. No purchases were made in 2010.

**Exhibit 8-8**  
**School Bus Model Year Distribution**



Source: Metropolitan Nashville Public Schools' Data, School Bus Consultants, LLC Chart.

**Exhibit 8-9** summarizes the age and mileage distribution of the School System’s buses.

**Exhibit 8-9  
Age and Mileage Distribution of School Buses**

		Bus Mileage					Total
		>500,000	>=350,000 to <500,000	>=200,000 to <350,000	>=100,000 and <=200,000	<100,000	
<b>Bus Age</b>	>15					1	<b>1</b>
	>=12 and <15	7	3	19	100	70	<b>199</b>
	>=10 and <12	7	2	6	84	48	<b>147</b>
	>=8 and <10	1	4	2	50	23	<b>80</b>
	>=6 and <8	2	3	1	23	26	<b>55</b>
	>=4 and <6	4			11	14	<b>29</b>
	>=2 and <4	2	4	2	2	70	<b>80</b>
	<2		1			90	<b>91</b>
	<b>Total</b>	<b>23</b>	<b>17</b>	<b>30</b>	<b>270</b>	<b>342</b>	<b>682</b>

Source: Metropolitan Nashville Public Schools’ Data, School Bus Consultants, LLC Chart.

Current Tennessee law requires replacement of buses no later than 17 years of age or 200,000 miles of use. Typical desired replacement guidelines are between 12 and 15 years and approximately 200,000 miles. An analysis of the current age and mileage of the School System’s bus fleet indicates that approximately 35 percent of the fleet is at or beyond desired replacement criteria of over 12 years of age or more than 200,000 miles.

As can be seen in **Exhibit 8-8**, the significant number of purchases in 2000, 2002, and 2004 are of particular concern because these vehicles are all aging at the same time and thus will require replacement at the same time. These vehicles are scheduled for replacement in 2015, but were still in the fleet at the time of the review. The total fleet number of 682 buses includes 72 spare buses which includes some units used to provide services to charter schools. The industry standard for spare buses is 10 percent of the active fleet, which is consistent with the current number.

The number of buses in **Exhibit 8-9** in the equal to or greater than 200,000 miles category is 70 buses or 10 percent of the fleet. Absent some change to financing, it is unlikely that the School System will have the funds to replace these buses.

Proposed legislation in the previous state legislative session would remove the current age and mileage restrictions on fleet replacement. At the time of this report, the legislation had not been adopted. If this law is enacted, the School System would be required to undertake a more rigorous analysis of maintenance costs to determine replacement – a process, which is not feasible currently given the capabilities of the existing fleet maintenance information system.

The average age of the support vehicle fleet is 10 years and approximately 120,000 miles. Given the diversity of these units, there is no comparable overall industry guideline, but each unit type has its own established replacement cycles. Moreover, there are no legislatively defined replacement criteria for these types of vehicles. Therefore, they are more likely to be retained beyond reasonable time frames. Based on common industry cycles, it is clear that regular replacement of these vehicles has also not occurred.

**RECOMMENDATION 8-I.1****Develop a long-term capital replacement schedule and financing plan to support both school bus and white fleet replacement.**

The provision of consistent capital funding for the replacement of vehicles is a key element in any overall cost control strategy within a fleet operation. Minimizing the total cost of ownership, that is the combined capital and operating costs, must consider a variety of both regulatory and operational data elements. State established criteria for replacement generally require a ceiling from which vehicles must be replaced. However, an inability to fully aggregate and analyze the associated operating costs of units may prevent the department from identifying high cost units that should be replaced early as a result of a lack of capital funding.

While industry guidelines regarding the replacement of school buses vary, they generally target a fleet that is approximately 6 to 8 years old on average. For example, the Council of Great City Schools suggests using a benchmark of an average age fleet no older than 7.0 years while the National Association of State Directors of Pupil Transportation recommends replacement cycles of 12 to 15 years (implying a 6 to 7.5 year cycle in a normally distributed fleet).

Using a state requirement for replacement at between 150,000 and 180,000 miles with a current maximum of 200,000 miles, the School System's average replacement cycle would be calculated at approximately 12 years and 200,000 miles. Strong consideration must be given to the safety, reliability, cost effectiveness, and adequacy of active buses that are this age.

**Exhibit 8-9** demonstrates that 200 buses are at least 12 years old (representing 29 percent of total buses). As previously stated, nearly 35 percent of all units are at or beyond the replacement guidelines of between 12 and 15 years or approximately 200,000 miles. A projected replacement cost of approximately \$75,000 to the nearly 241 buses that would be due for replacement in 2015 would indicate that approximately \$18,000,000 of school buses are due or overdue for replacement.

Support vehicle fleets have much greater diversity and consequently many more considerations when developing a replacement schedule. Industry practices are well established in this area and have long been a staple of municipal and university fleets that operate similar unit types. The essence of all planning efforts involves the development of a projected replacement schedule using average time, mileage, or replacement cost criteria. This schedule is then evaluated for alternatives to traditional cash financing that may allow for the realization of a lower total cost of ownership and immediate improvements in fleet equipment and reliability. A major consideration in all of these analyses must be the indirect costs associated with downtime and spare vehicle retention that is inherent in older fleets.

The Transportation Department should establish a single inventory of all fleet and equipment assets requiring replacement and assign each a defined set of replacement criteria. Using existing age, mileage, and maintenance cost information, the department should project the replacement date of each asset over a multiyear (at least 10) period. Using current cost information, the department should then project the individual unit costs and the aggregate annual costs based on a reasonable inflation factor that will provide the system with a 10-year schedule of replacement and cost projections. This schedule could then be manipulated to reflect fiscal and operational plans to determine the following three key concerns:

- the dollar value of funding required to support agreed upon replacement criteria for vehicle and equipment across School System operations;
- the likely impact on operating expenditures if these funding requirements are not provided; and
- the viability of alternative funding mechanisms to support the acquisition of assets across all departments and functions.

The analysis of these three key concerns will ensure that policy makers and senior leadership within School System are fully informed of the operational and financial impact of capital funding practices.

### **FISCAL IMPACT**

Establishing the precise impact of implementing a more rigorous replacement of assets schedule can only be determined when the School System establishes a defined funding approach to finance the replacement of assets. Regardless of the approach chosen, there will be an ongoing and substantial fiscal impact to replace aging vehicles. Assuming approximately \$51,000,000 in total assets (682 buses requiring replacement multiplied by an average estimated replacement cost of \$75,000 per unit) and a maximum 17 year replacement cycle (under current law), the average annual replacement cost would be approximately \$3,000,000 in nominal dollars assuming cash financing (40 buses per year at \$75,000 each.) Use of alternative financing such as leasing or sinking funds would alter the annual funding requirement depending on interest earnings and the terms of any lease.

### **TECHNOLOGY USE AND AVAILABILITY**

The vast amounts of data related to maintenance, parts management, fuel management, and asset management that fleet organizations are required to collect and manage necessitates a robust information management system. Providing the fleet operation with ready access to repair histories, work standards, and inventory values is critical to effective operations, which includes planning, managing, and evaluating work. This goal can only be accomplished through the structured, disciplined, and organized collection and validation of data from daily operations. When data is accumulated in this manner, it will provide decision makers with the ability to analyze trends at various levels of detail. Without this information, fleet performance knowledge will be absent, which can result in less accountability and higher costs.

### **OBSERVATION 8-J**

**The existing fleet management information system is inadequate to meet the needs of the Transportation Department.**

The Transportation Department currently uses a system called School Transportation Information Management System as its primary fleet management information system. The system is networked through one shop location with multiple terminals for shop supervisors, technicians, parts management staff, and the fleet manager. Access to the system is controlled through a user name and password and administered within the Transportation Department. The system is equipped with multiple modules associated with the typical services provided by a fleet maintenance operation including the following:

- maintenance and repair;

- preventive maintenance scheduling;
- parts management;
- vendor management;
- vehicle master records; and
- fuel management.

The ability of the system to support the current business practices of the fleet maintenance operation and the proposed operational changes is limited. Specifically, the data capture, input, verification, processing, analysis, and reporting requirements of each business area in which the Transportation Department engages are inadequate, overly complicated, and unsecure. The following is a brief summary of system inadequacies in five major functional areas, which include:

- **Fleet Asset Management** – A primary function of any fleet management operation is the efficient and cost-effective management of vehicle and equipment life cycle costs. A fleet management information system is a critical element in the effective life cycle management of fleet assets. The ability to capture, retain, and analyze the pertinent data is the key function of the system. In this area, we evaluated the ability of the system to support the full life-cycle management of each asset in the department’s inventory including vehicle specification development, asset utilization, acquisition, in-servicing, replacement planning, disposal management, and financial and accounting requirements. School Transportation Information Management System does not provide for basic replacement planning functionality offered by modern fleet management information systems. At best, the system is an electronic filing application for basic fleet inventory information. In addition, the system does not interact with School Systemwide asset management systems so there are likely differences in the inventories maintained in both systems.
- **Fleet Maintenance and Repair** – Large fleet maintenance organizations are complex and data intensive operations that require substantial technological infrastructure to ensure efficient and effective management. The system must support a wide variety of activities including: preventive maintenance scheduling and compliance monitoring, work scheduling and assignment, work order control, performance measurement, and customer communications. School Transportation Information Management System offers basic work order management functionality in that it will record labor effort and parts transactions and will allow for job-based recording of repairs. However, it lacks specific job coding functionality, technician management, and analysis tools available in modern systems.
- **Parts and Materials Management** – As a major adjunct to the maintenance and repair functionality, the effectiveness of any fleet maintenance operation will be dramatically affected by the acquisition, management, and provision of replacement parts. The fleet management information system is a key tool supporting the management and control of parts inventories. This includes the determination of what parts to stock, what parts to procure on an as-needed basis, and the control of inventory losses. School Transportation Information Management System allows for basic inventory management in that it records the use and acquisition of parts by individual item number and type. However, it lacks functionality to support the establishment of economic order quantities or to conduct detailed analysis of use. Additionally, there are highly limited data exporting tools that would allow for use of third party productivity software to assess inventory management practices.

- **Preventive Maintenance Management** – A significant inadequacy is in the preventive maintenance scheduling module. While the system has basic functionality to develop multi-level preventive maintenance programs, it is difficult to customize the programs to specific vehicle types and class codes of individual units. Additionally, the job coding functionality (the description of the types of services required) is inconsistent with current fleet management best practices. This prevents detailed analyses of system failures that would support targeted revisions to the preventive maintenance programs to avoid more costly and disruptive repairs.
- **Fuel System Functionality** – Fueling is one of the simplest but most critical components of the fleet operation. Providing users with the fuel necessary to accomplish their missions is only a small part of the operation. Fuel management includes the ability to provide operations managers with the data necessary to effectively schedule maintenance procedures, evaluate fuel efficiency, and identify potentially underutilized assets. There are currently two types of fuel transactions, neither of which is integrated with the School Transportation Information Management System. The system does not accept uploads from the system’s commercial fueling provider. Additionally, there is no electronic capture of School System provided fuel and no process established to transfer manually captured data into the system. Moreover, the failure to capture odometer readings negatively affects preventive maintenance planning.

Operations that support large, diverse fleets such as the School System’s require a robust data management tool that supports both the volume and complexity of transactions inherent to fleet maintenance services. The existing School Transportation Information Management System is, at best, marginally adequate to support the data collection and analysis requirements of an operation the size and scope of the School System. The most robust feature of the system is the vehicle master record, which allows for storage of all the necessary data to maintain a proper administrative and financial history of a vehicle. In virtually all other aspects of fleet maintenance, the system is inconsistent with current industry best practices and the analytical and reporting needs of the Transportation Department.

#### **RECOMMENDATION 8-J.1**

**Continue efforts to acquire, implement, and integrate a fully functional fleet management information system as soon as feasibly possible.**

The department has already identified the inadequacy of its existing fleet maintenance information system as a major impediment in its effort to transform the operations of the fleet function. Efforts continue to investigate alternatives to the existing system and the financial and operational impact associated with any system transition. We fully support and encourage the continuation of this effort and would recommend that the acquisition process be accelerated such that a system can be acquired during the 2014 calendar year.

The current fleet information system indicates that it is inadequate to support the current and future operations of the department. In addition, current plans to increase the magnitude of the performance measurement program cannot be implemented unless the functional inadequacy of the existing system is addressed. As part of this technology initiative, the department should also begin a systemwide upgrade of its fueling technology and fuel management practices (see the Fuel Management and Supply section of this report). An integrated implementation of these systems, and the processes and

procedures required for their use and management, would ensure that all necessary preventive maintenance and repair services are performed and accounted for in a manner that promotes cost effectiveness and operational efficiency.

The critical first step should be the development of a detailed request for proposal for a fleet management information system. The request for proposal should detail all of the functional and integration expectations of the system including:

- technician management;
- parts management;
- fuel capture and integration;
- asset management;
- preventive maintenance program design and scheduling;
- reporting and analysis; and
- integration with the routing software.

#### **FISCAL IMPACT**

Based on a recent bid prepared on another engagement, the estimated cost of system acquisition for a fleet of the size and complexity of the School System's would range from approximately \$80,000 to \$120,000. Annual maintenance costs for systems generally range from 10 to 15 percent of licensing costs. Taking the midpoint for the system results in a one-time cost of \$100,000. Annual maintenance at 15 percent of this cost would begin the second year at \$15,000 per year.

#### **COMPARATIVE COST ANALYSIS**

Performance measures are useful for improving the service delivery of transportation operations. Calculating quantitative measures of performance provides a starting point in analyzing performance. However, the resulting calculations should be considered in the context of the specific operational requirements and constraints faced by the School System. While some of these factors can be quantified, other important, albeit subjective areas, such as extra accommodations for special education students beyond those required for regular transportation, need to be considered as well. These accommodations may include special safety equipment as in safety vests, wheelchair tie downs, and additional onboard personnel needed for the safety and welfare of these students. In the case of the School System, these extra accommodations do include the additional monitors that are required on buses transporting students with special needs due to the Lopez Decree.

Two quantitative analyses were conducted to assess the efficiency of existing service delivery practices. The first analysis involved allocating each individual budget line item to a specific category of service. The second analysis was an assessment of routing services using School System data captured from the Edulog™ routing software. The data sources used were actual 2013 school year expenditures that were further adjusted to reflect non-budget costs such as benefits and do not include fleet depreciation or Metropolitan Transit Authority's pass costs. **Exhibits 8-10** and **8-11** summarize these analyses.

**Exhibit 8-10  
Allocated Costs**

	Total System Costs	Regular Education	Exceptional Education
<b>Total Costs</b>	<b>\$35,318,000</b>	<b>\$18,573,915</b>	<b>\$16,744,085</b>

Source: Metropolitan Nashville Public Schools' Allocated Budget.

**Exhibit 8-11  
School System Transportation Indicators**

UNIT TOTALS	TOTAL	REGULAR ED	EXCEPTIONAL EDUCATION	COUNCIL OF GREAT CITY SCHOOLS
<b>TOTAL BUSES</b>	682	480	202	-
<b>TRANSPORTED STUDENTS (ACTUAL)</b>	38,841	36,223	2,618	-
UNIT COSTS	TOTAL	REGULAR ED	EXCEPTIONAL EDUCATION	-
<b>ANNUAL COST PER STUDENT</b>	\$909	\$513	\$6,396	\$989
<b>ANNUAL COST PER BUS</b>	\$51,786	\$38,696	\$82,892	\$58,565
<b>DAILY COST PER BUS</b>	\$288	\$215	\$461	\$325

Source: School System Allocated Budget, Edulog™ Routing Software, and Council of Great City Schools.

In 2012, the Council of Great City Schools reported a median cost per student of \$989 for all transported students. The School System's cost per student is \$909 or 8 percent less than the Council of Great City Schools. The Council of Great City Schools also reported the median annual cost per bus for School System operated buses, for all services, to be \$58,565. The School System's annual cost per bus is \$51,786 or 12 percent lower than the Council of Great City Schools. All costs are calculated based on a 180 day school year.

**Exhibit 8-11** demonstrates that the School System's transportation operation is more efficient for regular education transportation but higher for exceptional education routing when compared to the Council of Great City Schools. These higher costs for exceptional education are attributable to the higher personnel requirements under the Lopez Decree. Furthermore, it is clear that exceptional education costs are disproportionate to regular education costs as the transported exceptional education population is seven percent of the total transported population but represents 47 percent of the total transportation budget. Nationally, the cost for transporting students with special needs is typically 6 to 10 times higher than transporting the regular student population. For the School System, the cost to transport students with special needs is over 12 times higher than the regular student population, on a per student basis.

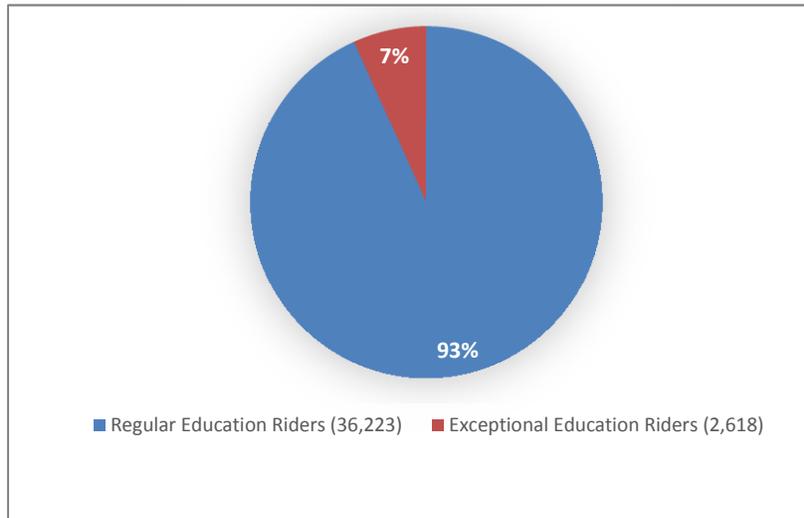
**OBSERVATION 8-K**

**The cost to provide exceptional education transportation is well above the national average on a per student basis.**

Due to additional accommodations and, at times, unique requirements for exceptional education students, the cost of providing transportation of students with special needs is always more expensive than the regular education delivery model. However, in the case of the School System, this cost is dramatically higher than the national average. A major operations budget line item associated with exceptional education students is bus monitor salaries and benefits. While monitors are required as part of the adherence to the Lopez Decree, it is an expensive requirement.

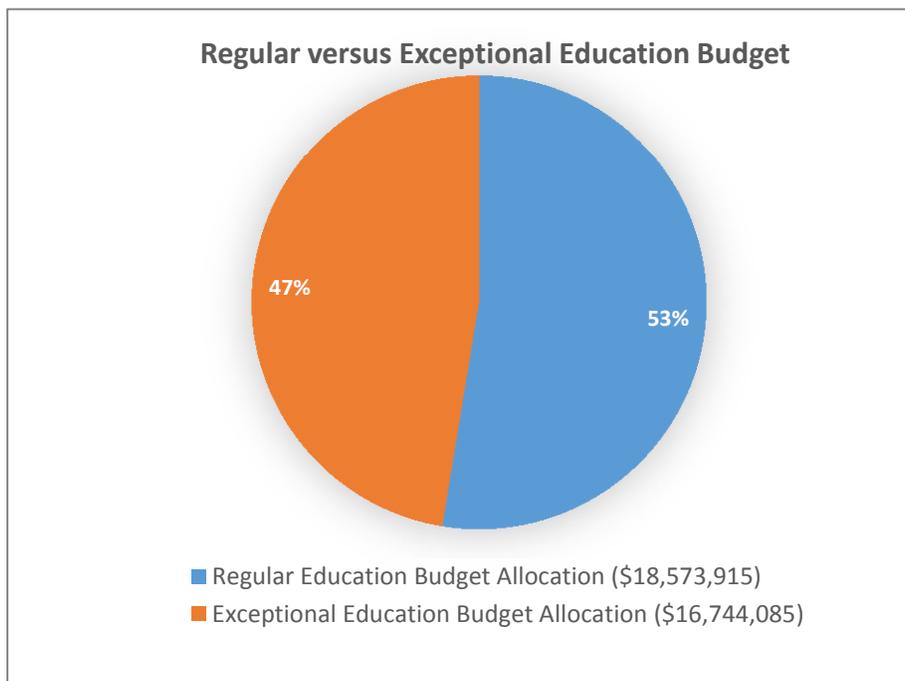
Exhibits 8-12 and 8-13 contrast regular and exceptional education ridership and the related budgets.

**Exhibit 8-12**  
**Regular Education Ridership versus Exceptional Education Ridership**



Source: School Bus Consultants, LLC Cost Allocation of School System Transportation Budget.

**Exhibit 8-13**  
**Regular Education Budget versus Exceptional Education Budget**



Source: School Bus Consultants, LLC Cost Allocation of School System Transportation Budget.

**RECOMMENDATION 8-K.1**

**Assign monitors to buses per Individualized Education Program requirements upon release from the Lopez decree.**

While it is not ideal to immediately cut back a service that has been provided for all students with special needs for several years, significant savings in the operating budget can be realized by reducing bus monitor salary costs by reducing the number of required monitors. Upon expiration of the Lopez Decree, bus monitors should be assigned to bus routes as directed by a student's Individualized Education Program and behavioral concerns rather than providing blanket coverage with monitors on all buses transporting students with special needs. There is no savings to the School System unless the employees become a function of a reduction in force. Should that decision be made by the School System, potential cost savings exist, as noted below.

**FISCAL IMPACT**

**Exhibit 8-14** displays the cost per student key performance indicators associated with exceptional education student transportation. The cost per exceptional education student is well above the national average as is the ratio of monitors per exceptional education bus.

**Exhibit 8-14  
Cost Per Exceptional Student Key Performance Indicators**

	National Average	Metropolitan Nashville Public Schools
<b>Transportation – Percent of Total Budget</b>	<b>4%-6%</b>	<b>4.8%</b>
<b>Cost per Student</b>	<b>\$650-\$850</b>	<b>\$909</b>
Regular Education	\$520-\$546	\$515
Exceptional Education	\$4,160-\$5,460	\$6,396
<b>Annual Cost per Bus</b>	<b>\$45,000-\$66,500</b>	<b>\$51,786</b>
Regular Education		\$38,696
Exceptional Education		\$82,892
<b>Exceptional Education Routes with Aides</b>	<b>55%</b>	<b>100%</b>

*Source: National Association for Pupil Transportation, School System Data.*

While the School System is required to have one monitor per bus, assigning them only as required by an individualized education program would yield savings. The national average for aides assigned to exceptional education routes is 55 percent. The fiscal year 2012 budget, the most recent that included transportation line items, indicates that aides salaries and benefits amounted to \$5,294,800 for 220 full-time equivalents. This amount equates to an average salary of \$24,067. With 202 exceptional education buses, 55 percent of monitors for these routes would cost an estimated \$2,671,437 (202 \* .55=111\*\$24,067).

When the Lopez Decree is no longer in effect, the annual savings would be \$730,032 (45 percent of aides no longer required = 91 aides \* \$24,067 = \$2,190,097/3) per year. This savings would reduce the cost per exceptional education student to \$5,559, which is very close to the upper end of the national average (\$16,744,085 budget less \$2,190,097 savings = \$14,553,988/2,618 special education students).

## **ROUTING EFFICIENCY ANALYSIS**

There are two primary steps to maximizing efficiency in a student transportation system. The first is to fill as many seats as possible on each bus run, known as “capacity utilization.” The second is to link as many bus runs to each bus as possible, a process called “pairing.” When both steps are effectively combined, the result is a greater efficiency within the routing structure resulting in a lower cost per transported student. **Exhibit 8-15** summarizes the indicators used to measure efficiency.

**Exhibit 8-15  
Routing Efficiency Indicators**

<b>Indicator</b>	<b>Purpose</b>	<b>Council of Great City Schools Guideline</b>	<b>School System’s Value</b>
Buses Used per 100 Students	This value provides an indication of the ability of the routing scheme to effectively utilize seating capacity and the ability of the bell time structure to support a multi-tier routing scheme.	1.0 to 1.3	1.2
Routes per Bus	This value provides an indication of how effectively the route development process is able to reassign buses to support multiple trips in a given day.	5 to 6 in a three tier system	5.5
Seating Capacity Use	This is an indication of how many available seats are scheduled to be filled through the route planning process. The greater the seats to be filled the more efficient the routing scheme.	50% to 60%	70%
Student Ride Time	Average student ride time provides an indication of service quality and an indication of available capacity with the time structure.	Dependent on bell schedule	51 minutes

*Source: Council of Great City Schools, Edulog™ Routing Software, School Bus Consultants, LLC Routing Analysis.*

The School System’s value of 1.2 buses used per 100 students indicates that it is effectively filling regular education buses. Moreover, capacity usage at 70 percent is above the performance guideline of 50 to 60 percent. It must be noted that these values were determined using actual load counts provided by transportation personnel from a semi-annual actual load count conducted each year. This is noteworthy because the number of eligible riders in the Edulog™ routing system was over 50,000 total riders. This figure placed the capacity usage at over 90 percent.

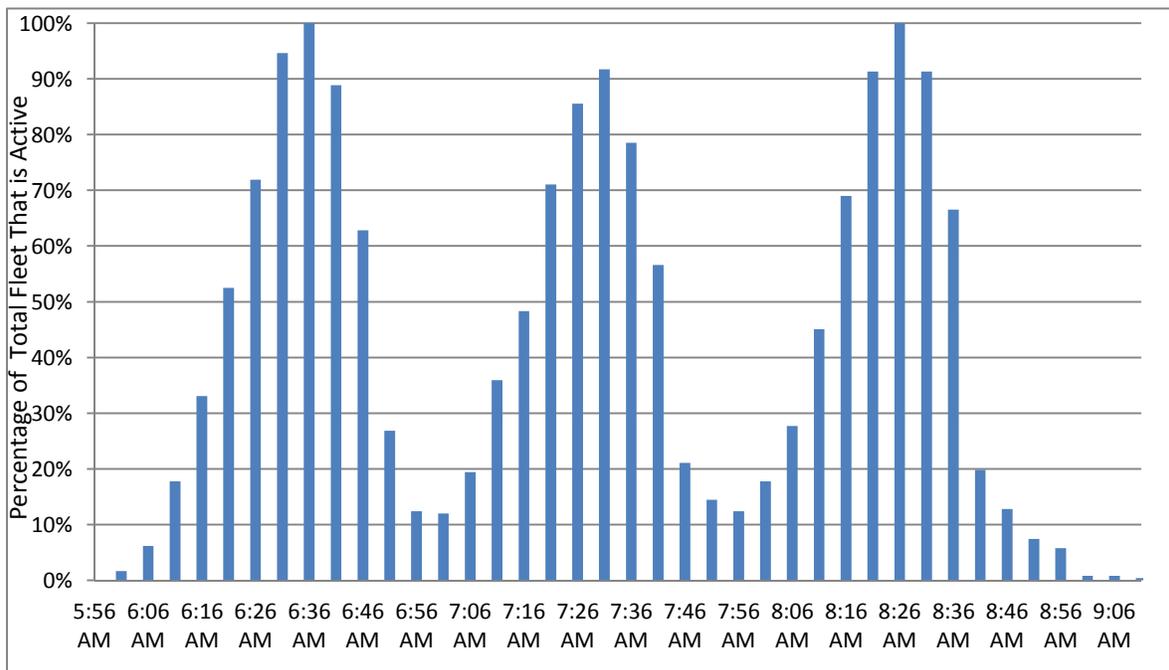
However, **Exhibit 8-18** in **OBSERVATION 8-I.2** shows there are buses that are overloaded which would skew the results. As the actual load counts were available, those values were used in these analyses. It is common practice in routing to overload buses where routing personnel know only a certain number of students are going to actually ride the bus. This is particularly true at the secondary level as 11th and 12th graders often drive or find alternative methods to reach school.

The School System's routes per bus per day value of 5.5, is in the mid-range of the guideline of five to six routes per bus per day. The average ride time value of 51 minutes is high considering that School System has a 55 minute routing window. Analysis of the Edulog™ route data indicates a low ride time of 14 minutes and high ride time of 2 hours and 19 minutes. This is one possible indication of the issues of late buses that have reportedly plagued the School System.

As discussed earlier in this category, one of the criteria for running an efficient system is to reuse the bus as many times as possible during the course of the day. The School System operates on a well-defined three tiered routing structure that has allowed for its performance measure in the reuse of buses to be 5.5, or in the middle of the guideline.

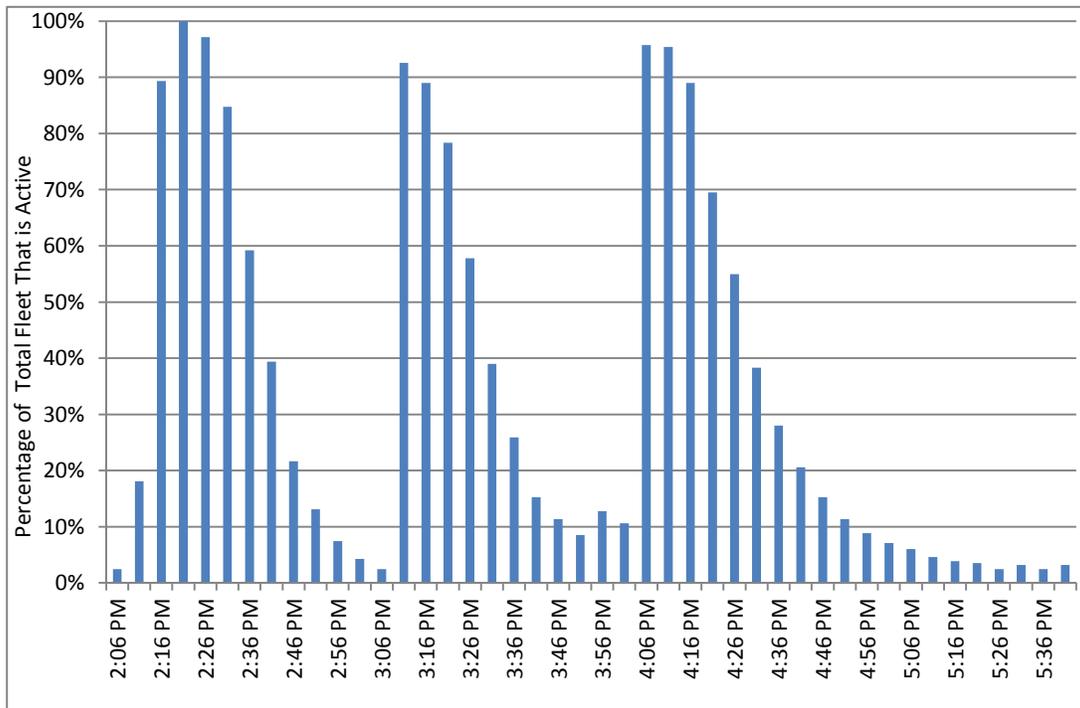
**Exhibit 8-16** and **8-17** illustrate the three tiered system in both morning and afternoon deployment of buses. The exhibits clearly illustrate the three, well-defined tiers that promote efficiency in the routing structure as it provides the opportunity to use fewer buses.

**Exhibit 8-16  
Morning Deployment of Buses**



Source: School Bus Consultants, LLC Routing Analysis Tier Model.

**Exhibit 8-17  
Afternoon Deployment of Buses**



Source: School Bus Consultants, LLC Routing Analysis Tier Model.

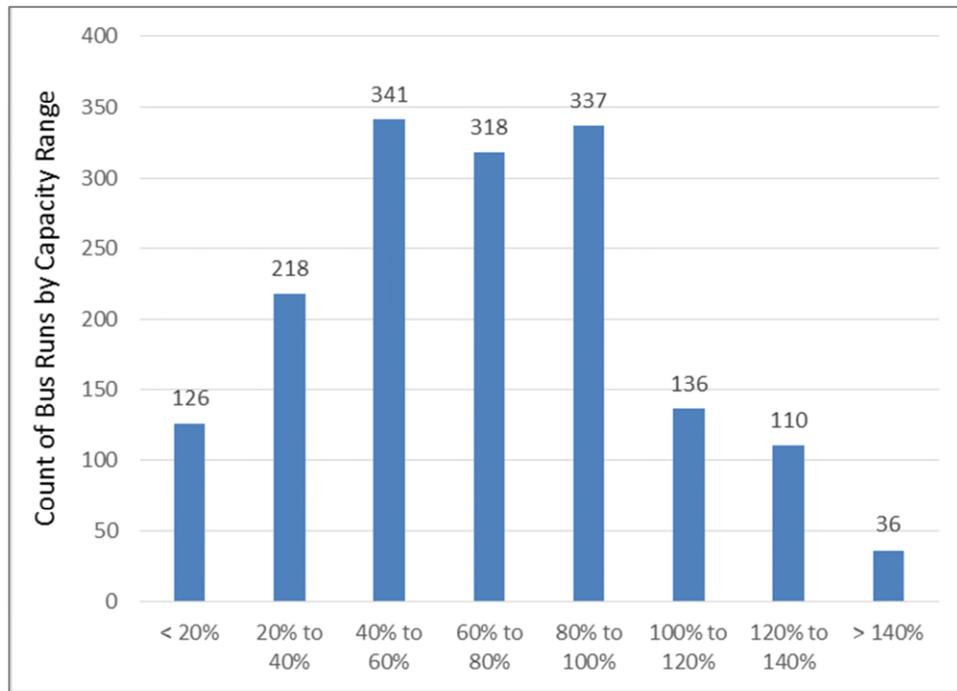
#### **OBSERVATION 8-L**

##### **Discrepancies exist between regular education planned ridership versus actual ridership.**

The School System uses routing software to plan daily bus routes for students. Using the Edulog™ software, 93 percent of available seats are filled in theory. In reality, through rider surveys performed by drivers bi-annually, it has been determined that the actual number is closer to 70 percent. Additionally, many buses have more students assigned than their rated capacity allows.

**Exhibit 8-18** is a summary of bus capacities in the School System’s planned environment. As shown, there are 282 routes that are planned for loads of greater than 100 percent of bus capacity, which represents 17 percent of total routes.

**Exhibit 8-18  
Percentage of Utilized Seating Capacity – Count of Total Runs**



Source: School Bus Consultants, LLC Routing Analysis.

### RECOMMENDATION 8-L.1

#### Analyze routes to include actual bus counts submitted by drivers.

When drivers perform audits of their route ridership, routers should use this information and reflect it in route planning. Route planning should be based on known capacities rather than on eligibility. This provides potential for routers to correct overcrowded buses, double routes, and reduce ride times, where required, that cause service delays. It also will result in more accurate bus lists. In case of emergencies, a potentially “missing” student will not be labeled as such because his or her status as a bus rider would be known.

An example of this audit process is the state of Florida, which requires school district and contracted drivers to audit their routes every day for one week. If a student does not ride the bus at all during the entire week of audits, they are removed from the bus assignment. The actual number of riders becomes the ridership number used for state reporting. More importantly, it provides an improved dataset of students who are actual riders. Therefore, routers can plan for actual riders versus planned riders. This provides an opportunity to reduce the number of buses required in the fleet.

#### FISCAL IMPACT

Establishing a process to reconcile planned riders versus actual riders can be completed with current resources and will not result in any additional costs. After this process has been established, it may be

possible to reduce the numbers of buses in use as the available supply better matches the demand represented by actual riders. It is not possible to quantify the potential reduction until the process to reconcile planned and actual riders on a route-by-route basis has been fully implemented.

### **OBSERVATION 8-M**

#### **Methods of recording accurate mileage are labor intensive and outdated.**

The Transportation Department has a significant amount of records that must be maintained for multiple purposes including the number of miles a bus travels by day and by year. The existing method of maintaining this data is not easily accessible as evidenced by the need to submit multiple requests for total miles driven for the 2012-2013 school year for this report. Several attempts by the review team to obtain this data were met with statements that the data is not in one place and time consuming to gather in a report format. The purpose of the request was to determine the School System's accident rate for this report to help determine the safety record of the department. Mileage from the Edulog™ routing program only provides live mileage, or those miles driven with students on board the bus. A report of trip mileage was available but has not been confirmed to be accurate as to the date range of the report.

The amount of miles a bus travels for deadhead miles, or those miles traveled without students on board, was not available. As a majority of the School System's buses are parked at locations other than the central bus depot (park-outs), deadhead mileage results from the following:

- trips to and from the bus depot from the driver's park-out for maintenance;
- trips to and from outlying fueling locations;
- mileage from the park-outs to the first stop on bus runs; and
- mileage from the last school in the morning back to the park-outs and from the last stop in the afternoon back to the park-outs.

The amount of deadhead miles cannot be quantified at this time, but there is reason to believe it is significant. Without this mileage, a safety report would be skewed rendering a result that the School System's safety record may be better, or worse, than using the existing live and trip miles for results.

### **RECOMMENDATION 8-M.1**

#### **Explore methods of recording all miles that make for easy retrieval of the data for reporting purposes.**

The School System should review the current methods of recordkeeping and explore improved options of data storage. The routing of buses may benefit from this information as well as an opportunity to reduce deadhead miles that can in turn reduce overall mileage and reduce paid driver time resulting in incremental savings to the School System. The amount of savings can only be determined if re-routing of buses were implemented and comparative cost analysis were completed before and after the re-routing.

The recommendation can be completed using existing personnel. Minimally, this information could be maintained in an Excel format or Access database for ease of reporting.

## FISCAL IMPACT

This recommendation can be implemented with existing resources.

## ALTERNATIVE SOURCING AND LEVERAGING OPPORTUNITIES

### **LEVERAGING METROPOLITAN NASHVILLE GOVERNMENT**

The review team explored whether there would be a strategic advantage to leveraging transportation resources provided by Metropolitan Nashville Government Office of Fleet Management Division of the Metropolitan Transit Authority.

Within this chapter, analysis conducted by the review team shows that the School System's Transportation Department is understaffed in the maintenance area and it has been recommended that additional mechanic staff be hired to fill this need. As an alternative to the direct employment of staff, the review team explored a shared services arrangement between the School System's Transportation Department and the Metropolitan Nashville Government Office of Fleet Management Division of the Metropolitan Transit Authority.

Metropolitan Nashville Government Office of Fleet Management Division of the Metropolitan Transit Authority would appear to be a natural partner for the School System given that the types of vehicles in operation are similar. This would appear to be particularly true in the area of fleet maintenance where the types of equipment (heavy truck and vehicle repairs with a more limited light duty fleet) appear similar. However, the similarity of vehicle type masks decidedly dissimilar operating protocols, financing mechanisms, regulatory infrastructure, and peak demand service periods.

Interviews with Metropolitan Nashville Government Office of Fleet Management Division of the Metropolitan Transit Authority indicated that the availability of excess resources within Metropolitan Nashville Government Office of Fleet Management Division of the Metropolitan Transit Authority to support the School System operations would be limited at best. Of particular note were potential contractual concerns with existing mechanic technician staff that may not allow for the transfer of this type of work. Additionally, Metropolitan Nashville Government Office of Fleet Management Division of the Metropolitan Transit Authority indicated no real availability of excess resources to support the School System.

The possibility of sharing infrastructure was also explored, particularly as it relates to fueling infrastructure. Metropolitan Nashville Government Office of Fleet Management Division of the Metropolitan Transit Authority indicated that in previous emergency situations, (including a major flood event in 2012), it had shared infrastructure with School System operations. However, the lack of physical space within the existing facilities would prevent a regular sharing of this type of resource without causing disruptions to both operations.

A final consideration was the sharing of technology resources between the two organizations. Metropolitan Nashville Government Office of Fleet Management Division of the Metropolitan Transit Authority uses a well-recognized maintenance management program. However, there were concerns expressed about the ability to extend access to the system due to both security and licensing issues.

Metropolitan Nashville Government Office of Fleet Management Division of the Metropolitan Transit Authority believes, and the review team concurs, that the functionality sought by the School System in a maintenance application would be more effectively met through the purchase of an application that was designed to support the unique demands of school transportation operations.

The limitations expressed related to availability of excess resources, limitations of size and scope of physical plant, and incompatibilities in technology greatly reduce the viability of shared services strategies between the School System and Metropolitan Nashville Government Office of Fleet Management Division of the Metropolitan Transit Authority.

### **PRIVATIZATION/OUTSOURCING POSSIBILITIES**

The review team also explored possibilities for fully outsourcing the transportation operation to a private outsourcing vendor that would include all buses, drivers, monitors, fuel, and maintenance.

School systems frequently turn to private companies to manage some support system functions such as transportation services in order to save costs or help them turn around deficit operations. Outsource providers generally focus on increasing productivity, lowering labor costs, route optimization and utilization of technology and purchasing power to save money. A national student transportation outsource provider analyzed the School System’s transportation financial statements and staffing composition to determine potential cost per bus route if they were to become the outsourced management company.

The national student transportation outsource provider calculated that the School System’s average annual cost per route is \$78,462 per year. They estimated projected contracted costs at low, mid and high points of \$66,390, \$69,456 and \$72,516 per bus, respectively. The outsource provider projected potential annual savings of between 8 to 15 percent may be achieved by contracting transportation services. These potential savings do not include extra-curricular activities involving transportation such as career fairs, twilight programs and field and athletic programs.

**Exhibit 8-19** shows the potential annual costs savings estimated by the outsource provider, if the School System were to outsource their transportation service program. The actual amount for contracted services will depend on the specific requirements contained in any request for proposal for transportation services to be issued by the School System.

**Exhibit 8-19  
National Student Transportation Outsource Provider  
Potential Annual Cost Savings**

<b>Outsourcing Considerations</b>	<b>Low Range Cost Savings Estimate</b>	<b>Mid-Range Cost Savings Estimate</b>	<b>High Range Cost Savings Estimate</b>
MNPS’ Bus Routes	455	455	455
MNPS’ Cost per Bus	\$78,462	\$78,462	\$78,462
Expected Contracted Cost per Bus	\$72,516	\$69,456	\$66,390
Potential Savings per Bus	\$5,945	\$9,005	\$12,072
Potential Annual Savings – Dollar	\$2,705,000	\$4,097,300	\$5,492,700
Potential Annual Savings – Percent	8%	11%	15%

Source: McConnell Jones Lanier & Murphy LLP Review Team.

It was also noted in outsourced provider’s analysis that the School System has a total school bus fleet of 717 buses to serve 455 routes. This is far in excess of the industry standard of 10 to 15 percent spare buses. Vendor A suggested a total fleet size of 510 buses might be sufficient to handle the transportation needs of the School System.

**Exhibit 8-20** shows what a bus replacement schedule would look like assuming a total fleet size of 510 buses. The exhibit shows that a total of 205 buses would need to be replaced over the next five years. At an average cost per bus of \$90,000, a capital investment of approximately \$18,500,000 will be required. A benefit of outsourcing is that the national student transportation outsource provider will expend the capital to acquire the needed buses and include in the contract costs. It is possible that the student outsource provider can deliver services and make the needed capital investment for buses at a cost to the School System that is approximately equal to or less than is currently being expended without providing for bus replacement.

**Exhibit 8-20  
Bus Fleet Replacement Schedule – After “Right Sizing”**

	Regular Vehicles	Percent of Total	SPED Vehicles	Percent of Total	Total Vehicles	Percent of Total
Total Initial Fleet Size	446	100.0%	227	100.0%	673	100.0%
Excluded due to right sizing	118	26.5%	45	19.8%	163	24.2%
New Fleet Size	328	100.0%	182	100.0%	510	100.0%
Replace at end of '14-15	0	0.0%	0	0.0%	0	0.0%
Replace at end of '15-16	16	4.9%	24	13.2%	40	7.8%
Replace at end of '16-17	36	11.0%	17	9.3%	53	10.4%
Replace at end of '17-18	98	29.9%	0	0.0%	98	19.2%
Replace at end of '18-19	14	4.3%	0	0.0%	14	2.8%
	<b>164</b>	<b>50.0%</b>	<b>41</b>	<b>22.5%</b>	<b>205</b>	<b>40.2%</b>

Source: McConnell Jones Lanier & Murphy LLP Review Team.

The review team believes that Transportation Department management and staff are capable of implementing the recommendations to improve internal operations contained in this report.

The review team also believes that the national transportation outsourced provider utilized a reasonable and appropriate methodology and rate structure to perform its assessment of the School System’s operation. Based on the assumptions included in the analysis, the review team believes the results are valid and useful for the School System’s assessment. If the School System were to undertake an effort to release a competitive solicitation for transportation services, it would be imperative that a full and complete definition of service expectations be provided. This is noted in the assessment when it is identified that actual savings could only be determined when the specific scope of services is released.

Any release of a competitive solicitation document must consider a variety of elements to ensure both competitive pricing and reasonable comparability to current services. These items include the following:

- **Management of stakeholder expectations** – outsourcing of publicly provided services can be a contentious and disruptive event if there is strong opposition to the transference of these services from the public to private sectors. Additionally, the development of a comprehensive response to competitive solicitation is a time consuming and expensive effort for vendor’s to undertake. Therefore, the School System must be prepared to define how it will determine the evaluation criteria that will determine whether outsourcing of services is in the best interest of stakeholders. Clarity of expectations will ensure that the process proceeds in a manner that maximizes support for the ultimate decision and offers vendors a clarity of expectation that can maximize pricing and service efficiency in response to the solicitation.
  
- **Definition of service expectations** – the degree of clarity and specificity related to service expectations that is included in a competitive solicitation is directly related to any risk premium that a vendor must incorporate into their pricing model. Therefore, it will be necessary to ensure that any solicitation defines parameters such as:
  - The maximum and average age of the fleet desired by the School System.
  - The type of routing scheme the vendor will be expected to support. This should include items such as the number of routes, route length (in time and mileage), depot locations, expectations regarding the availability of fuel, and supplemental service volumes (i.e., field and athletic trips). Vendors will use this information to model their own personnel and asset cost structure in order to provide the most advantageous pricing.
  - Expectations regarding provision of supplemental services including whether drivers and buses are expected wait with teams, whether there will be “drop-and-go” expectations, requirements for scheduling and cancellation, etc.
  - The use of transportation resources for outside services must be evaluated. As was mentioned, the department provides a number of services to the region that are not directly related to home-to-school services (warming centers for example). The desire to continue to make those services available and how to structure a pricing arrangement must be carefully considered.
  - Availability of the School System’s resources to vendors such as the shop and fuel site locations must be defined. In the case of the School System, this will be particularly important given the presence of a substantial portion of the fleet that is not domiciled at a central location. The consideration of how a continued use of this strategy might impact pricing due to the presence of significant deadhead miles must also be considered.
  - While there are a number of other components of an effective specification document, the items mentioned above have the most direct impact on the number of buses required, the parameters associated with the use of those buses, and the likely cost structure of the vendor. When developing the specifications package the School System must be cognizant of the fact that anything that influences the number of buses or the time required will have an influence on total cost.

- **Evaluation framework** – in order to fairly compare the responses received as part of a solicitation to existing operations, an evaluation rubric must be established prior to any review. As was mentioned above, this will ensure that all stakeholders are able to assess the viability of each response received. This must include considerations such as the fleet replacement requirements of current operations and the impact that services above and beyond the defined specifications will be assessed.
  - An important consideration associated with the potential for cost avoidance associated with capital replacement is any decision of financing strategy. The capital avoidance costs identified by the vendor are consistent with the annual totals identified by the project team in its analysis. Assuming the outsourced provider’s \$18,000,000 projected requirement over five years, a total \$3,600,000 per year on average would be required. The project team identified approximately \$3,200,000 per year in requirements. However, it is important to note that in both scenarios there is an assumption of cash financing for all replacements. To the extent that an alternative financing approach, such as leasing, would be pursued, the method used to evaluate projected vendor costs to the School System’s costs would necessarily require a more in-depth assessment.
- **Contractual management and oversight** – the method the School System chooses to oversee the contract will have a substantial influence on the potential savings to be realized in any actual implementation. The presence of a robust organizational structure responsible for the development of the actual bus routes and the evaluation of the vendor’s service should be strongly considered. This structure would ensure that the organization that is compensated for service delivery does not have control over how much service is being purchased. In any future proposal evaluation, the cost associated with this function must be deducted from the current School System’s costs or added to any vendor costs in order to properly compare the net cost savings that may be achieved.

The current departmental management should make significant efforts to implement the recommendations presented in this chapter. This will allow for continued improvement to further strengthen the Transportation Department’s operations.

Given the potential average annual estimated cost savings of \$4,097,300 per year, the School System should move forward with a formal request for proposal process during the 2014-2015 school year to determine if the savings opportunities can in fact be realized.

#### **FISCAL IMPACT**

Using the outsourced provider’s mid-range cost savings estimate, the School System has the opportunity to save \$4,097,300 annually beginning in school year 2015-2016 should they move forward with a formal request for proposal process.

## FISCAL IMPACT SUMMARY

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 8: TRANSPORTATION</b>								
<b>8-A.1</b>	Reimburse the Transportation Department budget for expenses related to field trip expenditures.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>8-B.1</b>	Fill the vacant exceptional needs route planner position, and hire one route planner for regular education and one route planner for exceptional education.	(\$83,100)	(\$83,100)	(\$83,100)	(\$83,100)	(\$83,100)	(\$415,500)	\$0
<b>8-C.1</b>	Invest in a fleet maintenance management system with a robust inventory management module, which is critical to repair parts cost control and inventory management.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>8-C.2</b>	Develop inventory management procedures to guide the decision making process relative to stock and non-stock parts and operational practices.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>8-C.3</b>	Assess current stocking levels and establish and maintain bids and formal contracts for all parts procurement.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>8-C.4</b>	Acquire and implement an effective fleet management information system and develop a parts contracting process.	(\$5,000)	\$0	\$0	\$0	\$0	(\$5,000)	(\$5,000)

**FISCAL IMPACT SUMMARY (Cont'd)**

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 8: TRANSPORTATION</b>								
<b>8-D.1</b>	Provide additional staffing resources to the maintenance operation.	\$0	(\$123,000)	(\$246,000)	(\$369,000)	(\$415,000)	(\$1,153,000)	\$0
<b>8-E.1</b>	Expand the scope of the preventive maintenance program.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>8-F.1</b>	Revise fuel management procedures to improve data available for maintenance services and analysis.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>8-G.1</b>	Review existing onsite fueling services to determine whether a modernized fuel management system is warranted.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>8-H.1</b>	Remove bus assignment procedures from the 2011-2012 Driver's Manual and assign as a management responsibility.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>8-I.1</b>	Develop a long-term capital replacement schedule and financing plan to support both school bus and white fleet replacement.	(\$3,000,000)	(\$3,000,000)	(\$3,000,000)	(\$3,000,000)	(\$3,000,000)	(\$15,000,000)	\$0
<b>8-J.1</b>	Continue efforts to acquire, implement, and integrate a fully functional fleet management information system as soon as feasibly possible.	(\$100,000)	(\$15,000)	(\$15,000)	(\$15,000)	(\$15,000)	(\$160,000)	\$(100,000)

**FISCAL IMPACT SUMMARY (Cont'd)**

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 8: TRANSPORTATION</b>								
<b>8-K.1</b>	Assign monitors to buses per Individualized Education Program requirements upon release from the Lopez decree.	\$0	\$0	\$730,032	\$730,032	\$730,032	\$2,190,096	\$0
<b>8-L.1</b>	Analyze routes to include actual bus counts submitted by drivers.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>8-M.1</b>	Explore methods of recording all miles that make for easy retrieval of the data for reporting purposes.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTALS—CHAPTER 8 WITH IMPLEMENTATION OF REVIEW TEAM RECOMMENDATIONS</b>		<b>(\$3,188,100)</b>	<b>(\$3,221,100)</b>	<b>(\$2,614,068)</b>	<b>(\$2,737,068)</b>	<b>(\$2,783,068)</b>	<b>(\$14,543,404)</b>	<b>(\$105,000)</b>
<b>TOTALS—CHAPTER 8 WITH OUTSOURCING IN YEAR TWO* – Move forward with a competitive request for proposal to determine if the savings opportunities to outsource transportation can in fact be realized.</b>		<b>\$0</b>	<b>\$4,097,300</b>	<b>\$4,097,300</b>	<b>\$4,097,300</b>	<b>\$4,097,300</b>	<b>\$16,389,200</b>	<b>\$0</b>

## Management Response

TRANSPORTATION

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
Management of Metropolitan Nashville Public Schools should:			
8-A.1	Reimburse the Transportation Department budget for expenses related to field trip expenditures.	<b>Partially Accept</b> This is a decision that must be made in context of the overall financial operations of MNPS. This will be studied and discussed during the 2015-2016 budget planning process; however, it is important to note that if implemented it will not impact the overall district budget since MNPS funds the transportation budget as part of its district operating budget.	July 2015
8-B.1	Fill the vacant exceptional needs route planner position, and hire one route planner for regular education and one route planner for exceptional education.	<b>Accept</b> Because of the current and ongoing implementation of a new school transportation software package, there will be necessary restructuring of the route planning and field trip planning functions of the department. The department has engaged the services of a transportation consultant to advise and support the restructuring and implementation of the new operating procedures, functions, and operations.	August 2015
8-C.1	Invest in a fleet maintenance management system with a robust inventory management module, which is critical to repair parts cost control and inventory management.	<b>Accept</b> New fleet maintenance software will be implemented in January 2015. This software includes a comprehensive inventory control system that is fully integrated with preventative maintenance and generates reports of the life cycle of every part in inventory. The fleet management application will have automated inventory controls using universal bar codes and other state-of-the-art inventory functionality.	January 2015
8-C.2	Develop inventory management procedures to guide the decision making process relative to stock and non-stock parts and operational practices.	<b>Accept</b> Fleet maintenance software will be implemented in January 2015. See response in 8-C.1.	January 2015
8-C.3	Assess current stocking levels and establish and maintain bids and formal contracts for all parts procurement.	<b>Accept</b> This process has been expanded and formalized with the functionality of the new transportation software and assistance from the MNPS Purchasing Department.	August 2014

## Management Response

TRANSPORTATION

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
8-C.4	Acquire and implement an effective fleet management information system and develop a parts contracting process.	<b>Accept</b> A contracting/bidding process for parts was developed in collaboration with MNPS Purchasing and implemented in August 2014. Fleet maintenance software will be implemented in January 2015.	Parts contracting August 2014 Fleet Management January 2015
8-D.1	Provide additional staffing resources to the maintenance operation.	<b>Accept</b> Pending budget approval for the additional FTEs.	July 2015
8-E.1	Expand the scope of the preventive maintenance program.	<b>Accept</b> Based on the recommendations from consultants, MNPS will implement the recommendation by March 2015.	March 2015
8-F.1	Revise fuel management procedures to improve data available for maintenance services and analysis.	<b>Accept</b> This recommendation will be implemented in February 2015 as part of the implementation of new fleet management software. This software includes a comprehensive fuel management/reporting function that is fully integrated with preventative maintenance and will generate reports for the life cycle of every MNPS vehicle.	February 2015
8-G.1	Review existing onsite fueling services to determine whether a modernized fuel management system is warranted.	<b>Accept</b> A cost/benefit analysis will be performed by MNPS internal audit to determine the feasibility of a fuel management system for the on-site pumps. These pumps are locked and utilized by very few white fleet vehicles with limited availability.	March 2015
8-H.1	Remove bus assignment procedures from the 2011-12 Driver's Manual and assign as a management responsibility.	<b>Accept</b> Route bidding procedures will be deleted from the driver's manual and reasonable cost-effective driver assignment procedures will be established based upon MNPS need and not driver seniority.	Summer 2015
8-I.1	Develop a long-term capital replacement schedule and financing plan to support both school bus and white fleet replacement.	<b>Partially Accept</b> MNPS has a capital funding plan that includes all capital funding requests across the district. There is a 10-year plan and annual requests for capital funding. Allocation of funds is based on Mayor and Council Approval. Funding is available for some years, but not	Already in place

## Management Response

TRANSPORTATION

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		in others. This makes it difficult to plan long-term. The transportation department does have a bus replacement schedule that is based upon state law and maintenance history that shows the break point on years of service, mileage, and safety.	
8-J.1	Continue efforts to acquire, implement, and integrate a fully functional fleet management information system as soon as feasibly possible.	<b>Accept</b> MNPS purchased new school transportation software in August 2014. Implementation began October 2014. This is a comprehensive fully integrated fleet management software package that includes many features such as: bus management and maintenance, tools to allow parents and students to look up bus stops and estimated time of arrival, GPS tracking, routing and planning tools, tracking tools for student embarkation and debarkation, field trip scheduling and invoicing.	August 2015
8-K.1	Assign monitors to buses per Individualized Education Program requirements upon release from the Lopez decree.	<b>Accept</b> Release from the Lopez decree will allow for more flexibility and better utilization of existing bus monitors throughout the entire fleet. Metro Legal is currently (October 2014) working to request a release from this legal decree from 2009.	Dependent upon release from Lopez Decree
8-L.1	Analyze routes to include actual bus counts submitted by drivers.	<b>Accept</b> Transportation currently conducts this analysis twice yearly. Beginning with the 2015-16 school year, the transportation department will be conducting counts on a monthly basis.	July 2015
8-M.1	Explore methods of recording all miles that make for easy retrieval of the data for reporting purposes.	<b>Accept</b> Recording all miles traveled is a function of the new transportation management system software. Note that this GPS-based tracking system is also installed on the entire MNPS white fleet, which will also allow for monitoring of all white fleet vehicles.	August 2015
Chapter 8- Alternative Sourcing Recommendation (page 8-47).			

## Management Response

TRANSPORTATION

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
	<p>Given the potential average annual estimated cost savings of \$4,097,300 per year, the School System should move forward with a formal request for proposal process during the 2014-15 school year to determine if the savings opportunities can in fact be realized.</p>	<p><b>Reject</b></p> <p>The assessment by First Student Inc. provided to the auditors was performed four years ago when the Transportation Department's business model was different and under different management. The figures quoted are not indicative of the current operating model, nor can they be validated with the current audit data provided. In addition, bid estimates created from data in this audit report and offered by private providers does not include 'in kind services' (buses provided from the transportation budget for special events).</p> <p>Any RFP for outsourcing transportation services should make an equal comparison to the current management of field trips and other 'in kind' services provided by the MNPS transportation department. This means that any RFP for outsourcing transportation services should include the provision that all field trips and all 'in kind' transportation (buses provided for special events at no cost to the school) be included in the bid cost of operation as currently exists in the MNPS transportation budget.</p>	<p>N/A</p>

## CHAPTER 9 – SAFETY AND SECURITY

**CONFIDENTIAL:** Not subject to records open to public inspection. Exemption granted by Tennessee Code Annotated § 10-7-504 (i) (1) "Information that would allow a person to obtain unauthorized access to confidential information or to government property shall be maintained as confidential."

Due to the sensitive information included in this report, which could detail vulnerabilities, weaknesses, and possible threats to Metropolitan Nashville's Public Schools infrastructure, the distribution for this report chapter was limited to management of Metropolitan Nashville Public Schools, the Board of Education, the Office of the Mayor, and the Metropolitan Nashville Audit Committee.

## CHAPTER 10 – TECHNOLOGY MANAGEMENT

### BACKGROUND

A school district's technology management affects the operational, instructional, and financial functions of the district. Technology management consists of planning and budgeting, technical infrastructures, application support, purchasing, and inventory control. To manage technology typically requires staff dedicated to administrative and instructional technology responsibilities.

Administrative technology includes systems that support a school district's operational, instructional, and financial functions. Administrative technology improves a school district's operational efficiency through faster processing, increased access to information, integrated systems, and communication networks. Instructional technology includes the use of technology as a part of the teaching and learning process. Instructional technology supports curriculum delivery, classroom instruction, and student learning.

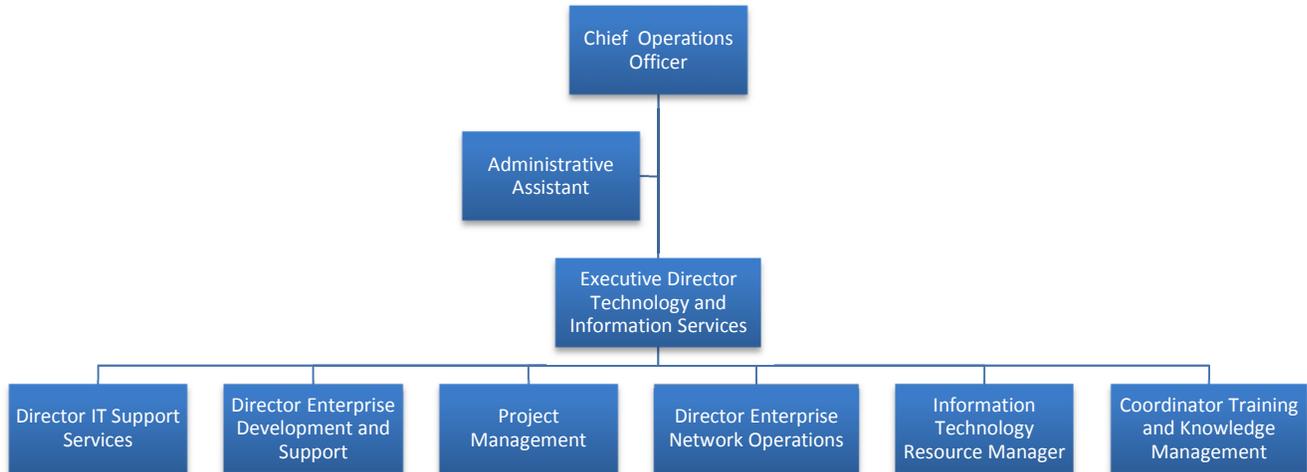
To facilitate technology management, a school district should have a technology plan that includes the integration of technology with administrative and instructional programs. A technology plan defines goals, objectives and actions for technology projects, assigns responsibility for implementation steps, and establishes deadlines.

In Metropolitan Nashville Public Schools (the School System), administrative technology is handled by the Technology and Information Services Department and instructional technology is handled by the Learning Technology and Library Services Department. **Exhibits 10-1** and **10-2** (both on the following page) show the organizational structure of the Technology and Information Services Department and Learning Technology and Library Services Department, respectively.

### CHAPTER HIGHLIGHTS

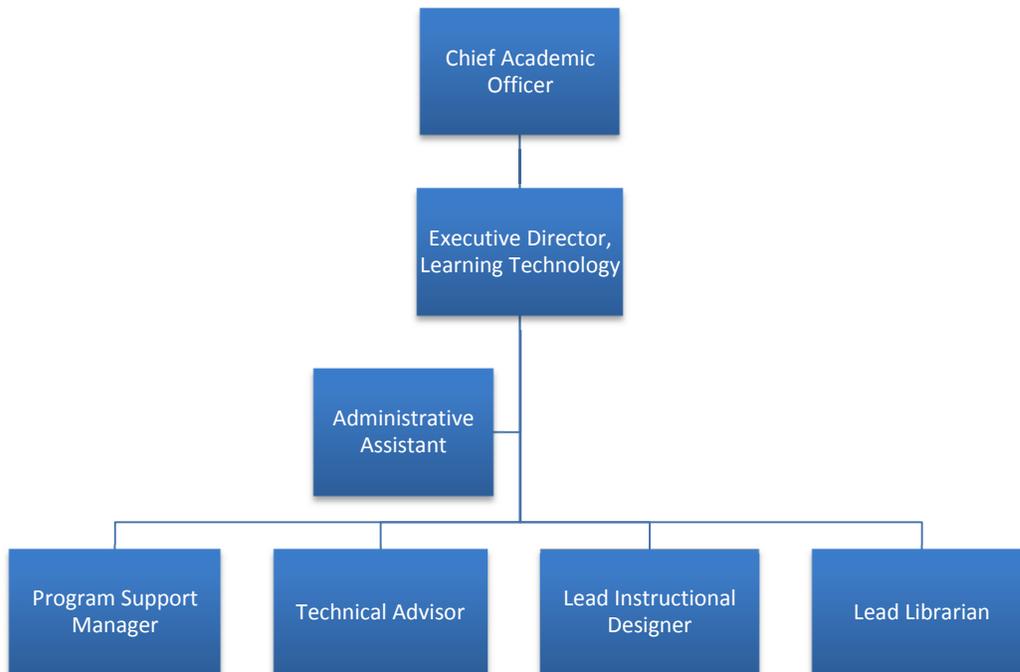
- The School System has a comprehensive data warehouse that provides pertinent student information that is consistent and accessible throughout the School System.
- The School System has a state-of-the-art professional development facility to provide a convenient and central location for instructional technology training.
- A methodology or formalized process would help determine the technical staff required to provide adequate and equitable support to the schools.
- A long-range technology plan that incorporates a hardware replacement strategy could more effectively drive district wide technology initiatives and technology infrastructure upgrades.
- Appointment of an information security officer would provide the expertise required to develop and manage technology security and risk strategies.
- A comprehensive disaster recovery/ business continuity plan would ensure restoration and continuation of technology operations in the aftermath of a catastrophic event.
- A service-level agreement (SLA) would address the service provided issues between Metro Nashville Public Schools and the City of Nashville's Metro Information Technology Services Department.

**Exhibit 10-1**  
**Metropolitan Nashville Public Schools Technology and Information Services Department**  
**2013-2014**



Source: Metropolitan Nashville Public Schools Technology and Information Services Department, January 2014.

**Exhibit 10-2**  
**Metropolitan Nashville Public Schools Learning Technology and Library Services Department**  
**2013-2014**



Source: Metropolitan Nashville Public Schools Learning Technology and Library Services Department, January 2014.

The Technology and Information Services Department is led by the executive director of Technology and Information Services who reports to the chief operations officer. The executive director of Technology and Information Services is supported by the director Information Technology Support Services, director Enterprise Development and Support, Project Management, director of Enterprise Network Operations, Information Technology Resource Manager, coordinator Training and Knowledge Management, and an administrative assistant that is shared with the chief operations officer. The Learning Technology and Library Services Department is led by the executive director of Learning Technology who reports to the chief academic officer. The executive director of Learning Technology is supported by a program support manager, lead librarian, lead instructional designer, technical advisor, and administrative assistant. **Exhibits 10-3 and 10-4** show the departmental staffing chart by position for the Technology and Information Services Department and Learning Technology and Library Services Department, respectively.

**Exhibit 10-3**  
**Metropolitan Nashville Public Schools**  
**Technology and Information Services Department, Staffing Chart by Position**  
**2013-2014**

Position	Number of Staff
Executive Director Technology and Information Services	1
Administrative Assistant	.5
Information Technology Resource Manager	1
Director Enterprise Network Operations	1
Manager Systems Support	1
Database Administrator	2
System Administrator	3
Manager Network Operations	1
Infrastructure Support Specialist II	4
Network Operations Center Technician	1
Infrastructure Support Specialist III	2
Telephony Technician	1
Manager Special Projects Team	1
Desktop Support Specialist	2
Information Technology Resource Specialist	1
Telecommunications Specialist	1
Project Management	1
Associate Project Manager	1
Director Enterprise Development and Support	1
Manager Business Intelligence Solutions	1
Reporting Specialist (Contractor)	1
Manager Software Development Services	1
Software Developer II	5
Manager Apps Training and Support	1
Lead Applications Training Specialist	1
Applications Training Specialist	3
Student Management System Product Manager	1
Applications Integration Analyst	1
Applications Support Specialist	3

**Exhibit 10-3**  
**Metropolitan Nashville Public Schools**  
**Technology and Information Services Department, Staffing Chart by Position**  
**2013-2014 (Cont'd)**

Position	Number of Staff
Web Master	1
Coordinator Training and Knowledge Management	1
Director Information Technology Support Services	1
Senior Secretary	1
Manager Central Support Group	1
Repair Shop Specialist	2
Help Desk Supervisor	1
Help Desk Specialist	3
Cluster Technology Manager	6
Technical Support Specialist	48
<b>Total Staff</b>	<b>109.5</b>

Source: Technology and Information Services Department Organization Chart, February 2014.

**Exhibit 10-4**  
**Metropolitan Nashville Public Schools**  
**Learning Technology and Library Services Department, Staffing Chart by Position**  
**2013-2014**

Position	Number of Staff
Executive Director - Learning Technology	1
Administrative Assistant	1
Program Manager	1
Audio-Visual Receptionist	1
Facilities Technician	1
Technical Advisor	1
Multimedia Support Specialist	1
Learning Systems Support Specialist	1
Lead Instructional Designer	1
Instructional Designers	4
Lead Librarian	1
Training Development Specialist	1
Training Specialist	2
Media Specialist	1
<b>Total Staff</b>	<b>18</b>

Source: Learning Technology and Library Services Department Organization Chart, February 2014.

Shown in **Exhibit 10-5** is a comparison of the School System's Technology and Information Services Department staffing level with several peer school systems based on number of students and computers supported. The comparison shows that the School System's Technology and Information Services Department supports less students per staffer but support more computers per staffer.

**Exhibit 10-5**  
**Metropolitan Nashville Public Schools Peer School Systems Technology Staffing Level Comparison**  
**2013-2014**

School System	Number of Students	Number of Computers	Information Technology Staff	Students Supported Per Staffer	Computers Supported Per Staffer
Duval County Public Schools	124,918	61,568	127	984	485
Polk County Public Schools	95,445	49,296	113	845	436
Metropolitan Nashville Public Schools	82,842	62,273	109.5	757	569

*Source: McConnell Jones Lanier & Murphy LLP Review Team Research, February 2014.*

The mission of the Technology and Information Services Department is to enhance learning and improve productivity through the use of effective information and communications technologies. The Technology and Information Services Department is responsible for implementing and maintaining the technology infrastructure and telecommunications capabilities of the School System. For infrastructure, this responsibility includes deployment, maintenance, and support of the server environment (network, application, and database), computers (desktop, laptop, and tablet), and printers (local and networked). For telecommunications, this responsibility includes deployment, maintenance and support of the telephone circuits, telephones, telecommunications servers, communications switches and routers, Internet circuits, firewalls, and content filters. The enterprise software applications that are supported by the Technology and Information Services Department are shown in **Exhibit 10-6**.

**Exhibit 10-6**  
**Metropolitan Nashville Public Schools**  
**Technology and Information Services Department Supported Enterprise Software Applications**  
**2013-2014**

Application	Purpose
PowerSchool/SMS	Student Information Management System
Enterprise Business System (EBS)	Payroll/Human Capital/Benefits
The Library Corporation	Library Management System
PCG EasyIEP	Exceptional Pupil Management System
Edulog	Student Transportation Management
Follett Destiny	Textbook Inventory Management
Student School Assignment System	Independent Vendor
SchoolNet GradeSpeed	School System Gradebook Software (All Levels)
WinSnap/WebSmart	Food Services POS/BOH/FARL Management System
HealthOffice	Student Health Data Management
The School System's Asset Inventory Management System	School System Asset Inventory Management
Blackboard ConnectEd	Charter School Call Out System
Blackboard Learning Management System	Learning Technology Software
Parent Link	School System Call Out System
CPSI SIFVASEL	Student Email/Active Directory Account Management
XAP	State Student Transcript System
American Education Corporation	A+ Student Learning and Assessment Solution
Nashville Public Library	Limitless Library System
Active Networks	Content Management System
Procure-To-Pay	Purchasing/Travel

Source: Metropolitan Nashville Public School Technology and Information Services Department, February 2014.

The mission of the Learning Technology and Library Services Department is to support schools and departments in integrating mobile, interactive, and instructional technologies. The Learning Technology Department manages the deployment of digital media and learning management systems at all schools. To support the implementation of Common Core State Standards and the Partnership for the Assessment of Readiness for College and Careers, schools require technology training and the integration of technology in classrooms to ensure that students are familiar with a variety of devices and applications.

The School System has developed a Learning Technology Plan to drive the acquisition and integration of technology to engage students, transform teaching and learning, improve achievement growth, and equip students with skills necessary for college and career readiness. **Exhibit 10-7** depicts the goals and strategies in the plan. The Learning Technology Plan aligns with the School System’s Strategic Goal Two – “Graduate all students from high school with college and career readiness by ensuring academic success for every student”.

**Exhibit 10-7**  
**Metropolitan Nashville Public Schools Learning Technology Plan**  
**Goals and Strategies**

Goal	Strategy
Goal 1: Transforming Teaching and Learning	<ul style="list-style-type: none"> <li>A. Curriculum: Use of technology as a tool for learning will be integrated across a rigorous and relevant curriculum that prepares students to be college and career ready.</li> <li>B. Professional Learning: All teachers, principals, and administrators will have access to professional learning opportunities that model technology integration and prepare participants for leveraging technology as a tool for learning and engagement in the their classrooms, schools, and offices.</li> <li>C. Instruction: Instructional technology will be used as a tool for engagement and personalized learning.</li> <li>D. Human Capital: The School System will recruit and hire high quality teachers with basic technology competency and a willingness to use technology to engage students and personalize learning.</li> <li>E. Student Assessment Services: Assessment strategies will be incorporated to ensure that students are technology literate and college and career ready.</li> <li>F. The School System’s Ownership and Clear Understanding of Roles: For instructional technology implementation to be successful, all parties in the School System will need to have clear understanding of their roles and responsibilities, action steps, timelines, and outcomes.</li> </ul>

**Exhibit 10-7**  
**Metropolitan Nashville Public Schools Learning Technology Plan**  
**Goals and Strategies (Cont'd)**

Goal	Strategy
Goal 2: Redesigning School Learning Environments	<ul style="list-style-type: none"> <li>A. Technology and Infrastructure: Technology, infrastructure, and data training will be available and in place to support teacher and student access in these varied environments.</li> <li>B. School-Based Support Structures: Schools will be supported by school-based personnel trained in instructional technology and technical troubleshooting by the School System’s experts.</li> <li>C. Facilities: Future construction and updating of learning environments will promote student collaboration; project based learning, and personalized learning via flexible, mobile furniture and fixtures.</li> </ul>
Goal 3: Building and Sustaining Community Leadership and Support	<ul style="list-style-type: none"> <li>A. Business and Community Organization Engagement &amp; Support: Collaborative oversight between the School System, business, and community leadership will hold the district accountable to this plan and provide assistance and support as needed for successful implementation.</li> <li>B. Marketing and Communication: Successful marketing and communication strategies will promote commitment to the successful integration of technology in K-12 classrooms from teachers, principals, administrators, parents, and students.</li> </ul>

Source: Metropolitan Nashville Public Schools Learning Technology Department, February 2014.

The School System’s Board of Education has approved the Learning Technology Plan. To demonstrate commitment and monitor progress, the Learning Technology Plan is on every agenda of the School System’s executive staff meeting. The executive director of Learning Technology and Library Services and the executive director of Technology and Information Services meet on a monthly basis to review and update the plan.

The School System’s Technology and Information Services operational budget for school year 2013-2014 is \$12,074,200. The capital budget from which all technology equipment is purchased for school year 2013-2014 is \$10,000,000. Therefore, the total Technology and Information Services Department budget for school year 2013-2014 is \$22,074,200 or \$266 per student. In addition, the Technology and Information Services Department supports more than 12,000 administrative, education, and operations staffers. **Exhibit 10-8** shows a summary of Technology and Information Services operational and capital budgets.

**Exhibit 10-8  
Metropolitan Nashville Public Schools Technology and Information Services Department  
Operational and Capital Budget Summary  
2013-2014**

Budget Category	Amount
Salaries – Clerical and Support	\$6,702,200
Supplies and Materials	109,900
Other Expense	1,103,600
FICA, Medicare, Pension and Insurance	2,718,300
Travel / Mileage	61,600
Contracted Services	1,378,600
<b>Total Operational Budget</b>	<b>\$12,074,200</b>
Total Capital Budget	\$10,000,000
<b>Total Budget</b>	<b>\$22,074,200</b>
<b>Total Students</b>	<b>82,842</b>
<b>Average Per Student</b>	<b>\$266</b>

Source: Metropolitan Nashville Public Schools FY 2013-2014 Budget Report, February 2014.

The School System’s Learning Technology and Library Services Department operational budget for the school year 2013-2014 is \$1,391,400 or \$206 per teacher. **Exhibit 10-9** shows a summary of the Learning Technology and Library Services 2013-2014 operational budget.

**Exhibit 10-9  
Metropolitan Nashville Public Schools Learning Technology and Library Services  
Operational Budget Summary  
2013-2014**

Budget Category	Amount
Salaries – Clerical, Certificated, and Support	\$518,000
Supplies and Materials	65,000
Other Expense	8,000
FICA, Medicare, Pension and Insurance	185,400
Travel / Mileage	15,000
Contracted Services	600,000
<b>Total Budget</b>	<b>\$1,391,400</b>
<b>Total Teachers</b>	<b>6,757</b>
<b>Average Per Teacher</b>	<b>\$206</b>

Source: Metropolitan Nashville Public Schools FY 2013-2014 Budget Report, February 2014.

The School System has 62,273 student accessible computing devices for a student-to-computer ratio of 1.33:1. **Exhibit 10-10** provides a breakdown of student accessible computing devices.

**Exhibit 10-10**

**Metropolitan Nashville Public Schools Student Accessible Computing Devices Breakdown**

Computing Device	Number of Units
PC Desktop Computers	25,333
Apple Desktop Computers	1,342
PC Laptops	28,397
Apple Laptops	547
IPads	6,560
Miscellaneous Smart Devices	94
<b>Total Computing Devices</b>	<b>62,273</b>
<b>Total Students</b>	<b>82,842</b>
<b>Student-to-Computer Ratio</b>	<b>1.33:1</b>

Source: Metropolitan Nashville Public Schools Technology and Information Services Department, February 2014.

The School System's student-to-computer ratio is slightly better than the selected peer school districts and much better than the Council of the Great City Schools median. **Exhibit 10-11** below shows how the School System's student-to-computer ratio compares to the selected peer school systems and the Council of Great City Schools median.

**Exhibit 10-11**

**Metropolitan Nashville Public Schools  
Peer School Systems Student-to-Computer Ratio Comparison**

School System	Total Students	Total Computers	Student-to-Computer Ratio
Atlanta GA Public Schools	49,128	27,315	1.80:1
Duval County FL Public Schools	124,918	61,568	2.03:1
Polk County FL Public Schools	95,445	49,296	1.94:1
<b>Metro Nashville Public Schools</b>	<b>82,842</b>	<b>62,273</b>	<b>1.33:1</b>
<b>Council of the Great City Schools Median</b>			<b>2.13:1</b>

Source: McConnell Jones Lanier & Murphy Review Team Research, February 2014.

The School System is awaiting approval of a request for \$6,000,000 in capital funds to purchase and upgrade over 5,000 computers to ensure the district is prepared for the next generation of student instruction and testing.

## BEST PRACTICES

Best practices are methods, techniques, or tools that have consistently shown positive results, and can be replicated by other organizations as a standard way of executing work-related activities and processes to create and sustain high performing organizations. When comparing best practices, similarity of entities or organizations is not as critical as it is with benchmarking. In fact, many best practices transcend organizational characteristics.

McConnell Jones Lanier & Murphy LLP identified 10 best practices against which to evaluate the organization and management of the School System’s Technology Management function. **Exhibit 10-12** below provides a summary of these best practices. Best practices that the School System does not meet result in observations, which we discuss in the body of the chapter. However, all observations included in this chapter are not necessarily related to a specific best practice.

**Exhibit 10-12**  
**Summary of Best Practices - Technology Management**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
1.	Central repository for storage of pertinent student and district data that’s accessible for analytical and reporting purposes.	X		The School System has implemented a centralized data warehouse to store student data that can be accessed for analytical and reporting purposes.
2.	Three or Five-year long-range technology plan.		X	The School System does not have a technology plan. <b>See Observation 10-B.</b>
3.	Implement a robust network infrastructure to support the operational needs of the district and integration of technology in the classroom.	X		The School System has installed a wireless wide-area network to facilitate Internet/Intranet connectivity at all the schools.
4.	Develop a professional development program to train the instructional staff in the use and integration of technology concepts and tools in classroom.	X		The School System has developed the All-Star Training Program where select teachers are trained to be facilitators and instructors for technology integration at their school.
5.	Website design that uses space, color, content layout appropriately to be a good communications and marketing tool.		X	The School System’s websites need to be redesigned for better content layout and ease of maintenance. <b>See Observation 10-D.</b>
6.	Disaster Recovery Plan with key components.		X	The School System does not have a Disaster Recovery Plan. <b>See Observation 10-E.</b>

**Exhibit 10-12**  
**Summary of Best Practices - Technology Management (Cont'd)**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
7.	Location of data center backup facility should be 10 to 50 miles from main data center.		X	The School System's planned data center back up facility location is only 2 miles from main data center. <b>See Observation 10-E.</b>
8.	Allocation of training budget for technology organizations is on a per-learner basis.		X	The Technology and Information Services Department does not have a training budget. <b>See Observation 10-F.</b>
9.	Service-level Agreements for internal and external service providers.		X	The School System does not have a service-level agreement with Metropolitan Information Technology Services for business application support. <b>See Observation 10-G.</b>
10.	Possess policies and procedures to govern technology functions and activities.		X	The School System has developed a standard operating procedures framework but has not developed any departmental policies and procedures. <b>See Observation 10-H.</b>

Source: McConnell Jones Lanier & Murphy LLP Review Team.

## ACCOMPLISHMENTS

### ACCOMPLISHMENT 10-A

**The School System has developed and implemented a comprehensive data warehouse to provide a central repository for student information that is consistent and accessible across the School System.**

At the urging of the state, the School System used Race-to-the-Top funds to develop and implement a centralized repository for pertinent student and other school system data that can be easily accessed and manipulated for analytical and reporting purposes. The data warehouse is a key initiative of the School System as it transitions to be data-driven. Demonstrating a commitment to data accuracy, the School System has put in place a data quality group with the responsibility to ensure that data going in and out of the data warehouse is current and accurate. Pertinent student data is extracted from the PowerSchool Student Management System and loaded into the data warehouse. The next evolution of the data warehouse is to make it a longitudinal data system. An education longitudinal data system is a data system with capabilities that include the following:

- collects and maintains detailed, high quality, student and staff-level data;
- links these data across entities and over time, providing a complete academic and performance history for each student; and
- makes data accessible through reporting and analysis tools.

An education longitudinal data system allows student and other district data to be linked and analyzed over periods of time versus the traditional data warehouse where the data is analyzed as a snapshot of a period in time.

### ACCOMPLISHMENT 10-B

**The School System has installed an Aruba based wireless wide-area network infrastructure at all schools to provide ready access to the Intranet/Internet and support the integration of technology throughout the School System.**

The infrastructure consists of category-6 commercial grade networks to provide 802.11n class wireless coverage into every classroom and common areas of schools. This wireless connectivity provides access to the Internet/Intranet sites and supports the “Bring your Own Device” initiative.

The wireless wide-area network is in the process of being upgraded to increase connection speed from 100MB to 1GB at all schools to provide the infrastructure to support the Partnership for the Assessment of Readiness for College and Careers implementation.

The wireless wide-area network is managed and monitored for service issues and standard bandwidth utilization. This allows for the planning of service increases based on trending utilization patterns.

**ACCOMPLISHMENT 10-C**

**The School System has constructed and equipped a state-of-the-art professional development facility at the Martin Professional Development Center Building to provide a convenient and central location for instructional technology training.**

The idea of the Martin Professional Development Center began in 2006 when the Nashville Public Education Foundation established a public/private partnership to improve the education experience of teachers. During the next two years, the foundation secured enough funds to turn the historic Eakin Elementary School into a new state-of-the-art professional development facility.

The Martin Professional Development Center is a high-tech facility designed to fulfill its mission of producing superbly trained educators. The center provides wireless Internet access to the 7,200-square foot Turner Hall that accommodates up to 500 guests (auditorium) or 350 guests (seated banquet-style). The center also provides ten training classrooms, ample meeting space, a technology wing with four training labs and 150-seat Teacher Resource Center.

The Martin Professional Development Center hosts the All-Star Training Program in which select teachers are trained in technology skills to be able to facilitate and train the teachers at their designated school to integrate technology in the classroom. This is a key initiative in the School System as it is the primary avenue for training the mass of teachers in technology skills and tools.

## DETAILED OBSERVATIONS

### STAFFING REQUIREMENTS

#### OBSERVATION 10-A

**The Technology and Information Services Department does not have a methodology or formalized process to assess and determine the technical support staff required to provide adequate and equitable support to the schools.**

Technical support is provided to the schools by Technical Support Specialists who are assigned to a specific cluster of schools. There are six clusters managed by cluster technology managers who are responsible for overseeing and prioritizing work tasks of their respective cluster. Staffing of the clusters is somewhat arbitrary based on the number of schools in the cluster and other subjective criteria. However, all schools are not the same size and do not have the same type and amount of equipment. This distinction leads to some clusters being understaffed and technical support tasks not being performed in a satisfactory or timely manner or not being completed at all.

In addition to handling routine technical problems, technical support specialists are requested to assist with new computing equipment imaging, testing, and rollout. Also, since the specialists are not authorized to keep spare part inventories, many times they must go to the central warehouse to pick up spare parts such as projector bulbs. This work is time consuming and diverts them from providing satisfactory routine support to users.

HelpSTAR is the web-based system used throughout the School System for submission and management of technology service requests. The system is used as a collaboration tool to prioritize and manage the technology support workload and communication of service request status to the requester. The system has dashboards, queries, and reports to provide real-time visibility into support performance.

Technical support at the schools becomes much more critical with the implementation of Common Core State Standards and the Partnership for the Assessment of Readiness for College and Careers which will rely heavily on computing equipment availability. The level of existing support raises concerns among the teaching staff as reflected in their survey comments shown below in **Exhibit 10-13**.

#### Exhibit 10-13

#### Metropolitan Nashville Public Schools Teacher Survey Technical Support Comments

Teacher Survey Technical Support Comments
"Help tickets get ignored for months"
"Tech support is frustrating. The tech people are usually pleasant to work with; however, waiting 3-5 months for a projector bulb eliminates the use of computer visuals and Elmos'. The Information Technology support people should have instant tickets available. When we stand in the same room and ask a question about something that is not working they may offer a suggestion but are clearly not able to do, what at home is a couple of clicks to fix a situation, but are not able to because they need a help ticket"
"Maintenance for non-emergency tickets is NOT replied to in a timely manner. Wi-Fi in the school has been updated but no one (teachers, students, or administrators) know how to link in to it. Therefore, students, and teachers are not able to work off of the Wi-Fi."
"Internet does not work about half the time. Computers are consistently not working. The School System is moving to computer-based testing next year, how will this work if the technology we have is not supported and maintained."

**Exhibit 10-13**

**Metropolitan Nashville Public Schools Teacher Survey Technical Support Comments (Cont'd)**

Teacher Survey Technical Support Comments
"Computer technology needs to be improved throughout the system. If we are going to be assessing students using computers, the students need to have routine access to the technology. More computers and greater bandwidth will be required for all schools."
"I have major concerns about PARCC testing occurring on ThinkPads. They are very difficult for students to use – super sensitive to kids' touch, opening multiple windows at one time, and small screen. It's bad enough to try to use them for research or learning, but the thought of high stakes testing on them, scary."
"To meet the needs of today's world, we need better training in teaching using computers. Then we need enough working computers available to teach our students. The current number of students-to-computers in my school is 8 to 1. I can't utilize a lot that is available to me and my students. More and better training and, foremost, enough computers to use them actively in the learning process are needed."
"The top two problems in my district are technology support and transportation issues."
"Schools should be assigned a technology specialist to help teachers really integrate technology."

Source: Metropolitan Nashville Public Schools Teachers Survey, April 2014.

A study by Massachusetts Institute of Technology in partnership with International Business Machines and Digital Equipment Corporation called "Project Athena" established some guidelines to help determine the staffing requirements to support a school district's technology environment. The resource variable and staffing ratio guidelines are shown in **Exhibit 10-14**. The approach taken by the study was to determine the human resource skills necessary to support the total environment, and then translate this into real numbers based on full-time employees.

**Exhibit 10-14**

**Massachusetts Institute of Technology "Project Athena" Study  
Resource Variable and Staffing Ratio Guidelines**

Resource Variable	Staffing Ratio
W = Number of workstations (Resources required to install, maintain, track and update)	W/500
U = Number of users (Account administration, user training, documentation, and configuration services)	U/1000
C = Number of clusters (physical co-located workgroups sharing servers, printers and other peripheral equipment)	C/15
A = Number of supported applications (Applications provided and supported centrally required to install, update, support, track and document software licenses)	A/50
V = Number of distinct vendor operating systems and platforms (Operating systems for different platforms that require frequent revisions and updates to and ensure interoperability with other systems and applications)	V/1
L = Number of licenses (Defined as the right to use the application software for multiple users on multiple platforms)	L/25

Source: Chaminade College Preparatory Information Systems (Arfman & Roden Report, 1992), September 2011.

The resource variable and staffing ratio guidelines can be used to determine the staffing level for an individual department or total staffing (TS) for an Information Technology organization ( $TS = W/500 + U/1000 + C/15 + A/50 + V + L/25$ ).

**RECOMMENDATION 10-A.1**

**Adopt a staffing methodology to assess and determine the appropriate staffing level for the technical support specialists required to provide adequate support to the schools.**

The department should use the appropriate resource variables and staffing ratios shown in **Exhibit 10-14** in developing the methodology. This methodology could also be used to equitably assign technical support specialists to the clusters.

For example, using the above guidelines for the number of devices supported, the current technical support specialists of 48 is understaffed ( $62,273 / 500 = 124.5$ ). Based on this calculation the current technical support specialist staff is less than half the number required to provide support to the schools. This validates what was conveyed in the technical support specialists focus group interview session that they are understaffed for the number of devices they have to support without including other technical tasks they are expected to perform.

The executive director of the Technology and Information Services Department should direct the Technology Department heads to use the adopted staffing methodology to assess and determine the appropriate staffing levels for their functional areas. The staffing methodology results can be used for staff level justification during the budgeting cycle.

**FISCAL IMPACT**

This recommendation can be implemented with existing resources.

**RECOMMENDATION 10-A.2**

**Develop a staffing plan to address any staffing shortfalls as a result of the assessments using the adopted staffing methodology.**

The executive director of the Technology and Information Services Department should collaborate with the Human Capital Department to develop the staffing plan. The plan should include position title, level and skills required, hiring timeline, and projected costs.

**FISCAL IMPACT**

The fiscal impact of this recommendation cannot be determined until the staffing assessment is completed and the staffing plan is developed.

**RECOMMENDATION 10-A.3**

**Develop key performance indicators with targets to measure the effectiveness of the technology support provided to the schools.**

A task force of representatives from the schools and the Technology and Information Services Department should collaborate to establish the key performance indicators and targets. Some samples of key performance indicators that should be considered include the following:

- service request acknowledgement time;
- service request resolution time;
- hardware request completion time;
- help desk first contact resolution;
- help desk abandonment rate; and
- help desk speed to answer.

The HelpSTAR system should be used to capture and track the performance data. The results for the performance indicators should be reported on monthly.

### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

## **PLANNING**

### **OBSERVATION 10-B**

**The School System does not have an adequate long-range technology plan that incorporates a hardware replacement strategy and links to the School System and campus improvement plans.**

Currently, the Technology and Information Services Department uses the Learning Technology Plan and the School System's Strategic Plan to drive its efforts. The major initiatives from these two plans include the following:

- provide a comprehensive and functional technology infrastructure;
- provide technology capabilities that are useful for staff members and students;
- use technology to support diverse learning techniques and styles;
- provide a means for interactive communication between the School System and parents, students, and community;
- provide information electronically about school and division programs and academic progress;
- provide systems to access relevant and current data by appropriate users; and
- provide systems, services and support to enable all students to have access to online instructional resources beyond school hours.

These initiatives are helpful, but do not provide a comprehensive roadmap for implementing technology initiatives and making technology investments. Without a well-planned comprehensive roadmap, technology projects are undertaken and investments are made in a haphazard manner.

A comprehensive long-range technology plan can effectively drive districtwide technology initiatives and required infrastructure upgrades to support the ever-changing technology landscape. Also, a long-range technology plan is required to solicit E-Rate and other federal/state grants to fund technology projects. The best practice for a school district's long-range technology plan timeframe is at least three-years to allow for planning, acquisition, implementation, and training on any new processes and equipment required to implement the plan. Some districts use a five-year plan if there is a hardware replacement strategy or lease program that requires the plan to extend beyond three-years.

A long-range technology plan typically includes goals, action plans, timelines, performance criteria and success measures, designated staff responsibility for goal accomplishment, and financial allocations. Well-developed, comprehensive long-range technology plans lay a foundation for effective planning and decision-making in helping a district achieve its stated goals. Also, comprehensive plans facilitate effective budget planning, resource allocations, and technology acquisitions. **Exhibit 10-15** shows a list of key components of a comprehensive long-range technology plan.

**Exhibit 10-15  
Comprehensive Long-Range Technology Plan Key Components  
May 2014**

<b>Long-Range Technology Plan Key Components</b>
District Profile – includes district statistics such as number campuses, students, technology budget, and the current technology infrastructure.
Executive Summary and Background Information – includes technology planning committee organization, vision and goal statements.
Needs Assessment – the assessment process and results of what is needed in the School System.
Technology Infrastructure Goals and Objectives – includes network standards.
Instructional Technology – include standards, acquisition process, and usage.
Technology Literacy – includes professional development requirements.
Administrative and Business Operations Technology – includes standards, acquisition process, and usage.
Technology Replacement Cycles
Hardware/Software – include standards and acquisition process.
Budget Projections and Funding Sources

*Source: McConnell Jones Lanier & Murphy LLP Review Team, Best Practices as Researched and Compiled, May 2014.*

**RECOMMENDATION 10-B.1**

**Research, assess, and develop a comprehensive five-year long-range technology plan.**

The Learning Technology Plan and the School System’s strategic plan should be used as a foundation for developing an upgraded comprehensive long-range technology plan. Also, the School System and campus Improvement Plans should be taken into consideration. The following steps should be taken for the development of the plan:

1. establish a Technology Committee to assist with the development of the long-range technology plan and provide guidance on other technology related matters. The Technology Committee should consist of representation from the following key stakeholder groups:
  - board;
  - administration/operations staff;
  - teachers/educational staff;
  - technology department;
  - students;
  - parents; and
  - community.
  
2. Re-evaluate and determine the technology department’s mission and vision. The mission and vision should be encompassed in two short statements that explain the overall purpose of the plan.

3. perform a formal needs assessment of administrative and operational hardware and software, including those used by Transportation and Food Service departments;
4. develop goals and objectives the plan should accomplish. The goals should be split into two categories: short-term and long-term;
5. develop a plan and timeline with who is responsible for each goal;
6. develop a budget for the accomplishment of each of the goals. This should include funding sources and what happens if funding is no longer available;
7. develop a process to evaluate the plan on a regular basis and to be updated as needed; and
8. submit the plan for approval through the appropriate channels.

During the development of the plan the Technology Committee should meet on a regular basis to provide input and review progress. Upon completion and approval of the plan, the committee should meet at a minimum twice annually to review progress in accomplishing the plan goals and to update the plan as needed.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

#### **RECOMMENDATION 10-B.2**

**Develop a detailed hardware migration and replacement strategy that would integrate with the five-year long-range technology plan.**

Steps that can be taken in establishing the strategy are:

- establishing the criteria to be used in determining the hardware to be migrated or replaced;
- locating and tagging the hardware earmarked for replacement;
- developing schedule and timeline for the hardware replacement; and
- establishing a budget and funding source to replace the hardware.

This recommendation is vitally important as the School System becomes more data driven and the increasing need to provide reliable hardware to support computer-based testing.

Many school districts are using leasing as a viable option to fund their hardware replacement strategy. Due to capital funding constraints, this is an option the School System schools should consider. The leasing programs at some districts have resulted in a lower total cost of ownership (TCO) because of ensured standardization and lower maintenance costs. It also assures a consistent refresh process and cycle with the most up-to-date hardware at the time.

#### **FISCAL IMPACT**

The fiscal impact of this recommendation cannot be determined until the hardware replacement strategy is established and the method of funding is determined.

**OBSERVATION 10-C**

**The School System does not have an information security officer to provide leadership and expertise to develop and manage technology security and risk strategies.**

School districts, regardless of their size, face Information Technology security risks. Threats such as worms and viruses, cyber-attacks, the loss of sensitive information and identity theft are ever-evolving. School district officials must be diligent about understanding the risks and taking appropriate steps to mitigate them. The following are some steps that school districts can take include the following:

- designate a primary individual responsible for technology security;
- know how to recognize that there might be a security problem;
- understand how to deal with security problems;
- physically protect equipment;
- protect essential hardware/software;
- control access;
- protect information;
- implement training and awareness programs;
- develop Internet and acceptable use policies; and
- take steps to securely dispose of storage media and equipment.

Taking many of these steps is vitally important to the School System as it pursues a vision of becoming data-driven and with the implementation of a comprehensive data warehouse. Both of these initiatives consist of the collection and storage of sensitive student, instructional, and operational data. As custodian of this data, the School System must insure that proper storage, access, and use of the data are maintained. This goal requires dedicated leadership and expertise to coordinate and manage the development, implementation, and administration of a range of technology security processes, policies, and procedures based on industry guidelines. As a start, the School System has developed and published on its website the following security related policies that include the following:

- technology acceptable use policy;
- student use of personal technology;
- data warehouse security;
- employee social media policy; and
- use of media and computer software in schools.

**RECOMMENDATION 10-C.1**

**Appoint a dedicated technology security officer to ensure that its information security needs are met.**

The individual should be qualified either as a Certified Information Systems Security Professional (CISSP), Certified Information Security Manager (CISM), or possess an equivalent industry certification. The

individual should also have knowledge of the Privacy Act, Children’s Internet Protection Act (CIPA), Children’s Online Privacy Protection Act (COPPA), and Family Educational Rights & Privacy Act (FERPA). The technology security officer’s responsibilities should be but not limited to the following:

- provide leadership and expertise working with the School System’s leadership to develop and manage technology security and risk strategies;
- provide strategic direction for the management of security risks;
- maintain current knowledge of rules, regulations, legislation, technology, and procedures governing Information Technology;
- keep current on emerging internet threats and coordinates proactive internal responses;
- develop and maintain information security policies and procedures that ensure appropriate technical and administrative controls exist across all Information Technology resources and data;
- direct security/risk assessment efforts;
- manage security audits, controls and assurance activities;
- manage an information security incident management program to ensure effective forensic analysis, interviewing, incident documentation, escalation and communication processes with established lines of authority and external organizations (law enforcement, media, community, and parents), timely containment and correction of security breaches, and subsequent prevention and detection measures;
- define security aspects of systems architectures, determine testing requirements and methodologies, and conduct analytical risk management activities related to the development of information systems; and
- manage the development, implementation, and maintenance of the School System’s disaster recovery plan.

The technology security officer should collaborate with the Metropolitan Information Technology security officer to ensure consistency in policies and that the School Systems’ security concerns are addressed for systems hosted and supported by Metropolitan Information Technology Services.

The executive director of Technology and Information Services should define the criteria and skill requirements for the information security officer position and collaborate with Human Capital to determine how it should be filled.

### **FISCAL IMPACT**

If the appointment of the technology security officer is made with an outside hire, based on the salary research for the Nashville area, the fiscal impact would be \$70,000 per year. The five year impact would be \$350,000 ( $\$70,000 \times 5 = \$350,000$ ).

## **SCHOOL SYSTEM WEBSITE**

### **OBSERVATION 10-D**

**The School System's and individual campus websites are not well designed, or used as effective communication and marketing tools.**

The School System's website layout has a substantial amount of verbiage on the main webpage making it appear cluttered and uninviting. The menu tabs are well-defined and displayed at the top of the webpage making navigation within the site very easy. For the most part, the campus' websites have the same main tab layout as the School System's website and all have the School System's information window area at the top that is used to display districtwide information. But the campus' website content layouts are inconsistent.

The School System's website content is managed and updated by the Communications Department. Each school has a designated content manager who is responsible for managing the website and updating the content. The School System's webmaster is responsible for designing and updating the School System's and all schools' website layout templates. Request for website access, content or template changes are received through the HelpSTAR system. These requests are reviewed regularly and handled by the Communications Department and Webmaster accordingly.

Since there is no backup for the webmaster, some template or content changes may take longer than expected due to workload constraints. It was conveyed during the review team interview sessions that the website is hard to update due to the Action Point platform it is based on. The School System has recognized this as a problem area and has begun to put plans in motion to move to a different platform such as SharePoint.

For a license fee, the School System uses the Active Network Content Management System for managing the content displayed on the School System and schools websites. A content management system provides the capability to manage the content of a website without technical skills. An application like SharePoint can provide this same capability resulting in a potential cost savings.

While the School System and schools have websites they are not being used as effective communication and marketing tools. For example, the School System website has basic information about board members and district staff, but it is not as comprehensive as found on other large school districts' websites. Each individual school's website differs greatly in content layout and quality. Although many schools serve students with significant bilingual populations, at the time of the review team visit, there was no website translator installed for the School System or school websites. This is critical if the desire is to use the websites as effective communication tools.

**RECOMMENDATION 10-D.1**

**Develop plans to redesign and implement new websites for the School System and schools.**

In developing the plans and redesign criteria, key stakeholders from the following functions should be actively involved:

- district administration;
- principals;
- teachers;
- students;
- parents; and
- community.

Regular design and implementation meetings should be held to ensure that all stakeholders’ needs are being addressed as the project proceeds.

District and school websites should be effective communication and marketing tools. A visitor gains a first impression about the school district when they initially view and read their website. The site should be up-to-date with quality, error-free content that’s interesting to read and easy to find. **Exhibit 10-16** provides some best practice tips to be followed in redesigning and updating the content of the School Systems’ websites.

**Exhibit 10-16**  
**Best Practice Tips for Redesigning Metropolitan Nashville Public Schools Websites**

Tip	Rationale
Make/Keep it Up-to-Date	<ul style="list-style-type: none"> <li>• A quality website offers current, timely information about the organization. Visits are made to the website for a reason—to find out something about the School System or school. Some may simply want the school’s phone number or address, while others need more information about the upcoming events. If the site is filled with outdated information, visitors wonder when it was last updated.</li> <li>• Be sure that the website includes only current information. If possible, set time-sensitive posts to expire off the site automatically. Place the School System or school’s phone number, address, and staff email addresses in a prominent location so the school community can find what they need quickly.</li> </ul>

**Exhibit 10-16**

**Best Practice Tips for Redesigning Metropolitan Nashville Public Schools Websites (Cont'd)**

Tip	Rationale
Brag on the School System or School	<ul style="list-style-type: none"> <li>If the School System or school is like most others, the students and teachers are actively involved in creative, diverse activities that build a successful learning community, about which you love to brag. Word of mouth only gets so far, so brag online too! School choice makes competition within a town—and even district—fierce. So devote a Web page to featuring school successes and to bragging on the students and staff. When prospective families see what great, devoted teachers are in the school, it just might outshine the school down the street.</li> </ul>
Look for Errors	<ul style="list-style-type: none"> <li>The School System and schools are in the business of educating the future leaders of the country and there's nothing worse than typos on a district or school website. Take the time to proofread something that's going worldwide on the Web, it begs the question, "Is that how much you care about my child?" Have another set of eyes look at the website before it goes live, making sure the website is professional and error-free.</li> </ul>

Source: School Webmasters Blog "Don't Just Have a Website", November 2013.

The main objective in redesigning the School System's and schools' websites should be to make them effective communication and marketing tools that are easy to manage and maintain. **Exhibit 10-17** shows ten things that must be avoided to ensure that quality websites are redesigned to meet that objective.

**Exhibit 10-17**

**Ten Things to Avoid in Redesigning Metropolitan Nashville Public School's Websites**

Avoid	Reason
1. Counters	<ul style="list-style-type: none"> <li>They do not add credibility to the School System, school or website and look amateurish. For analytical purposes, view site statistics through the server logs (or any statistics analysis not publically displayed). The site visitors don't really care how many "hits" your site gets.</li> </ul>
2. Excessive Animation or Flashing Text	<ul style="list-style-type: none"> <li>If the animation does not serve a purpose and add to the message, lose it. In the 90's they were fun, but have now become annoying and detract from the professionalism of the site and the message in the content. The site is there to provide useful and current information.</li> </ul>

**Exhibit 10-17**

**Ten Things to Avoid in Redesigning Metropolitan Nashville Public School's Websites (Cont'd)**

Avoid	Reason
3. Broken Links	<ul style="list-style-type: none"> <li>There are tools that can be used to check the entire site for any broken links. Get in the habit of running those frequently to keep the links useful. Broken links make site visitors feel that the site is stale and the School System or school don't care enough to keep it fresh. Parents also get upset when the form or page they are looking for is no longer there. Off-site links are not under your control, but when they become broken, fix or delete them.</li> </ul>
4. Under Construction	<ul style="list-style-type: none"> <li>All sites should be constantly under construction if they are to stay current and useful. However, don't place any "Under Construction" signs on the site. If it is not ready to display, don't make the page live until it is.</li> </ul>
5. Slow Page Load Speeds	<ul style="list-style-type: none"> <li>Fast wins! The established standard is text that is visible in five seconds or less. It is acceptable for graphics to take a few seconds longer if they are worth waiting for, but always optimize them for the Web. However, while speed is important, don't completely sacrifice quality for two seconds of load time. Pixilated photos detract from visual appeal and professionalism. A site exists to provide information to the customers—parents, students, staff, potential new hires, and the community—so always keep their needs at the forefront of all design decisions. They went to the site to save time, don't test their patience or they will leave.</li> </ul>
6. Splash Screens or Doorway Pages	<ul style="list-style-type: none"> <li>Site visitors want to get to the information they are looking for and not to see the mascot growl or roar or the logo morph into something clever. It's fun for the designer, but a waste of time for your target audience.</li> </ul>
7. Inconsistent Navigation	<ul style="list-style-type: none"> <li>The site visitors should feel confident that while transitioning from page-to-page the navigation structure will remain consistent. The navigation should be kept straight-forward and simple. Do not confuse the visitor with redundant navigation scattered around the page, with different buttons or links pointing to the same page.</li> </ul>

**Exhibit 10-17**

**Ten Things to Avoid in Redesigning Metropolitan Nashville Public School’s Websites (Cont’d)**

Avoid	Reason
8. Inconsistent Theme and Style	<ul style="list-style-type: none"> <li>A professional site design will maintain a theme throughout. This tells visitors that there is care enough to build a cohesive, well thought out website. It also assures visitors that they haven’t wandered off the site. Don’t change styles from one department to the next just because they want to do their own thing. The site needs to display an organized front, not a fragmented, departmentalized image. A district or school site shouldn’t be a reflection of individual personality, but a team of professionals dedicated to a united cause.</li> </ul>
9. Stingy White Space	<ul style="list-style-type: none"> <li>Readability requires the good use of white space. Use adequate margins and line-height and avoid wide blocks of text that are difficult to read. On a monitor, it is too difficult and they simply won’t do it if the text runs from one side of their screen to the other.</li> </ul>
10. Obnoxious Background Colors	<ul style="list-style-type: none"> <li>The School System and school colors may be neon orange and teal, but don’t use them for background colors on the website or as a text color. While there may be an attempt to “brand” the website with the School System or school colors, obnoxious colors make it difficult to read content and distracts the user. Save those colors for graphic images, the school mascot, or maybe a heading or two. Don’t overdo it.</li> </ul>

Source: School Webmasters Blog “10 Things to Avoid on Your School Website”, February 2013.

Adhering to the above “tips” and “things to avoid” will ensure that the redesigned district and schools websites will be effective communication and marketing tools for years to come.

The Clarksville-Montgomery County School System’s website, [www.cmcss.net](http://www.cmcss.net), is an excellent example of a district’s website that is well-designed and has spacious content layout. This school system’s school websites have a consistent design and content layout.

**FISCAL IMPACT**

This recommendation can be implemented with existing resources.

**RECOMMENDATION 10-D.2**

**Redesign and implement new websites using SharePoint as the platform.**

SharePoint is already implemented in the School System and can provide the functionality required for high-quality websites. Since SharePoint is already installed in the School System, there will be no added cost to use it. SharePoint’s functionality includes content management, which eliminates the need for the Active Network Content Management System resulting in a potential cost savings to the School System. Also,

SharePoint provides for better collaboration and personalized content views. This feature is important in maintaining website consistency across the School System.

The executive director of Technology and Information Services should direct the webmaster to design and implement new school system and campus websites using SharePoint in accordance with the redesign and implementation plan developed by the key stakeholders.

#### **FISCAL IMPACT**

Using SharePoint as the new website platform would eliminate the need for the Active Network Content Management System. This change would result in an annual license fee savings of \$18,000. The five-year cost savings would be \$90,000 ( $\$18,000 \times 5 = \$90,000$ ).

### **DISASTER RECOVERY PLAN**

#### **OBSERVATION 10-E**

**The School System does not have a comprehensive disaster recovery/business continuity plan to ensure continuity of operations in the aftermath of a catastrophic event.**

Disaster recovery and business continuity planning are related interconnected concepts dealing with different aspects as defined below:

- disaster recovery addresses what processes and solutions are in place to resume operations; and
- business continuity asks are redundant systems, processes, and services available to continue operations while recovery takes place.

Successful disaster recovery begins and ends with advance planning. Although the School System has begun putting an infrastructure in place to provide a redundant backup facility, there is no comprehensive plan to direct and manage those efforts, which are being performed piecemeal with no realistic timeline for completion.

The primary objective of a disaster recovery/business continuity plan is to provide a set of actions to be taken to minimize chaos and ensure organizational stability and orderly recovery after a disaster. **Exhibit 10-18** shows the components of a comprehensive best practices disaster recovery plan.

**Exhibit 10-18**  
**Components of a Best Practices Disaster Recovery Plan**

<b>Components</b>	
1.	Executive Summary
2.	Disaster Recovery Planning
2.1	Identification and Analysis of Disaster Risks/Threats
2.2	Classification of Risks Based on Relative Weight
2.2.1	External Risks
2.2.2	Facility Risks
2.2.3	Data Systems Risks
2.2.4	Departmental Risks
2.2.5	Desk-Level Risks
2.3	Building the Risk Assessment
2.4	Determining the Effects of Disaster
2.4.1	List of Disaster Affected Entities
2.4.2	Downtime Tolerance Limits
2.4.3	Cost of Downtime
2.4.4	Interdependencies
2.5	Evaluation of Disaster Recovery Mechanisms
2.6	Disaster Recovery Committee
3.	Disaster Recovery Phases
3.1	Activation Phase
3.1.1	Notification Procedures
3.1.2	Damage Assessment
3.1.3	Activation Planning
3.2	Execution Phase
3.2.1	Sequence of Recovery Activities
3.2.2	Recovery Procedures
3.3	Reconstitution Phase
4.	The Disaster Recovery Plan Document
4.1	Document Contents
4.2	Document Information
	– Purpose
	– Scope
	– Assumptions
	– Exclusions
	– System Description
	– Roles and Responsibilities
	– Contact Details
	– Activation Procedures
	– Execution Procedures
	– Reconstitution Procedure
4.3	Document Maintenance
	– Periodic Mock Drills
	– Experience Capture
	– Periodic Update

Source: Cisco Systems, *Disaster Recovery Best Practices*, 2008

A comprehensive disaster recovery/business continuity plan takes into consideration all aspects of the technology environment such as the following:

- computer room operation/equipment;
- servers;
- network infrastructure/equipment;
- software applications;
- database content; and
- telephony operation/equipment.

A key component of the disaster recovery process is having a backup facility with the capacity to host the necessary technology infrastructure to maintain operations during and after a disaster. A popular strategy is to have an external site that can support business systems, applications, and customer data until the primary data center can return to normal operations.

**RECOMMENDATION 10-E.1**

**Establish a disaster recovery team.**

The team should be comprised of representatives from the director’s office, principals, teachers, administrative staff, technical staff, maintenance, security, and external vendors with the mission of developing a comprehensive disaster recovery/business continuity plan. **Exhibit 10-19** shows actions to be taken in developing the plan.

**Exhibit 10-19**  
**Actions to Develop a Comprehensive Disaster Recovery/Business Continuity Plan**

Action to be Taken	Rationale
Work as a team	<ul style="list-style-type: none"> <li>• It is vital to take a big picture view of the School System in developing the plan. If only one individual or group creates the plan, something could easily be overlooked.</li> </ul>
Define the scope and mission	<ul style="list-style-type: none"> <li>• The scope statement should explain why and how the disaster recovery team is going to develop the plan.</li> <li>• The mission statement should clearly define the document’s main purpose.</li> </ul>
Assess the risks	<ul style="list-style-type: none"> <li>• The risk assessment should review all of the risks the School System may face – even those that seem wildly outlandish. Use the team’s best judgment to single out the most credible threats to the School System’s security; these are the crises the plan should ultimately address.</li> </ul>
Define priorities and perform a business impact analysis	<ul style="list-style-type: none"> <li>• Deciding what’s most important to the School System’s day-to-day operations will help the team determine how to best leverage financial and staff resources to protect those interests.</li> </ul>

**Exhibit 10-19**

**Actions to Develop a Comprehensive Disaster Recovery/Business Continuity Plan (Cont'd)**

Action to be Taken	Rationale
Define recovery strategies and procedures	<ul style="list-style-type: none"> <li>• This section of the plan should describe each disaster and recommend actions to take if it occurs.</li> <li>• The plan should outline the costs associated with recovery efforts and the procedures to follow if the plan must be executed.</li> </ul>
Develop a communication plan	<ul style="list-style-type: none"> <li>• This section of the plan should define each disaster's actual or potential threat to human safety or to property; the need to relocate operations; and acceptable time periods for response and recovery.</li> <li>• Define recovery teams, recovery infrastructure, and alternate sites.</li> <li>• Collect and have available in one place the phone numbers and other personal contact information of internal and external personnel who should be contacted if an emergency occurs.</li> </ul>
Create an appendix	<ul style="list-style-type: none"> <li>• A disaster recovery plan should be mostly nontechnical. There will be a need for solid technical documentation to recover the systems once the immediate trauma of a crisis has passed.</li> <li>• Include in the plan's appendix a comprehensive inventory of all Information Technology resources, data backup policies, vendor lists, service contract lists, diagrams and other technical specifications.</li> </ul>
Consider the disaster recovery plan a living document	<ul style="list-style-type: none"> <li>• Failing to keep the plan up-to-date defeats the purpose of having one.</li> <li>• Store a physical copy of the document in a three-ring binder that's kept in the data center (or another secure location) so it's easy to access if the systems go down.</li> <li>• Keep a record of all changes, and be sure to date and sign off on each modification.</li> </ul>
Test often	<ul style="list-style-type: none"> <li>• There's no point in having a well-thought out plan if it can't be executed. Testing the plan regularly will ensure that problems are addressed before an actual disaster occurs.</li> </ul>

Source: EdTech Magazine "How to Write an Effective Disaster Recovery Plan", August 2011.

Several key essential elements the disaster recovery/business continuity plan should include are:

- complete list of critical activities performed within the School System;
- identity of which systems and staff are necessary to perform functions;
- list of key staff for each function and their responsibilities;
- inventory of all technology assets including hardware, software systems and data, documentation, and supplies that correctly identify the location with sufficient information to document loss for insurance recovery;
- defined actions to be taken when a pending disaster is projected; and

- actions to be taken to restore critical functions.

### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

### **RECOMMENDATION 10-E.2**

#### **Revisit the selection of the planned location to house the backup computing facility.**

Based on the best practice of having a backup facility 10 to 50 miles from the primary data center puts the planned location too close to the main data center to be a viable option since it is only approximately two and a half miles away.

In selecting a new backup facility the School System should consider two approaches, which are to build its own backup data center or contract out for these services with suitably qualified third-party organizations. The following are key points in favor of building a backup facility:

- management control of these specialized resources;
- utilization of them as alternate processing centers to handle heavy usage periods;
- security controls managed by the School System; and
- reduced likelihood of school data being intermingled with other organizations' data.

Some negative factors include:

- start-up costs associated with building the facility;
- increased real estate costs and general overhead for the backup space; and
- costs for staffing the backup site.

Points in favor of outsourcing disaster recovery to a third-party include:

- minimal or no start-up costs;
- shared costs of staffing and technology resources;
- managed security at the site; and
- on-site expertise available 24-7.

Downsides of a third-party solution include:

- potential hidden costs or fees associated with declaring a disaster; and
- potential unavailability of facilities if too many subscribers are already using the backup center.

Among the key issues to be addressed are costs (upfront and ongoing), availability of resources (human and technology) when needed, additional unplanned costs following a disaster, and contractual issues. Also, in

evaluating backup facility selection options Metropolitan Information Technology Services' approach and backup facility should be considered.

The executive director of Technology and Information Services should direct the director of Enterprise Network Operations to assess and select a backup facility location that best meets the needs of the School System in accordance with best practices.

#### **FISCAL IMPACT**

The cost to implement this recommendation cannot be determined until a decision is made on the back up facility approach and location.

### **PROFESSIONAL DEVELOPMENT AND TRAINING**

#### **OBSERVATION 10-F**

**The School System lacks a professional development and training program that ensures the technical staff possesses the knowledge and skills to effectively perform their job responsibilities.**

A consistent and common theme expressed during interviews with the technical staff was the lack of and need for training. Due to the absence of formal training, the technical staff feels that they are thrown into jobs that they are not prepared adequately to perform. This situation leads to a perceived sink or swim work environment. Training that they receive is either free vendor offered, free webinars, or obtained on their own. The executive director of the Technology and Information Services Department confirmed that there is no money budgeted for training. The few outside training courses and seminars that members of the department attend are paid for out of the travel budget.

Professional development is the continuous process of acquiring knowledge and skills that relate to one's job responsibilities or work environment. It plays a key role in maintaining trained, informed, motivated staff. There are a variety of approaches to professional development, including consultation, coaching, training, mentoring, and technical assistance. Training encompasses all types of facilitated learning opportunities, ranging from formal coursework, conferences and seminars, and on-the-job training (OJT).

A professional development plan consists of clear guidelines for knowledge and skills improvement to include goals, rationale, activities, milestones, and resources. The following are benefits of an effective professional development and training program:

- provides a clear statement to the staff that there is interest and commitment to their professional growth;
- focuses on the mutual commitment (employee and employer) necessary to make career development a reality;
- enables predictable budgeting of training costs; and
- provides for feedback on the efficacy of training.

**RECOMMENDATION 10-F.1**

**Develop a professional development and training program for the technical staff that would be incorporated into the performance evaluation process.**

The Technology and Information Services management team in collaboration with Human Capital should clearly define development/training objectives and a development/training plan with activities, sources/timing, and expected completion date for each technical staff member. Participating in the professional development process should produce a formal, written document that is agreed upon by the manager and employee. A copy of the plan should be stored in the employee's personnel file and reviewed with the manager on a routine basis.

**FISCAL IMPACT**

This recommendation can be implemented with existing resources.

**RECOMMENDATION 10-F.2**

**Establish a training budget to ensure the technical staff has the appropriate knowledge and skills to perform their job responsibilities.**

Training is highly important to keep the technical staff abreast of the ever-changing nature of technology equipment and applications. This is apparent in the School System as the move is made to become a data and technology-driven district. The training budget allocation should be adequate enough to accommodate the professional development/training plans and the knowledge required to support the technology infrastructure and applications. The best practice for Information Technology organizations to allocate a budget for training is on a per-employee basis.

**FISCAL IMPACT**

Based on the 2013 Training Industry Report, on average, across all industries including education, organizations spent \$881 per-employee for training. Using that figure as the base with the total technical staff count of 108, the annual training cost for the Technology and Information Services Department would be \$95,148 ( $\$881 \times 108 = \$95,148$ ). The five-year cost would be \$475,740 ( $\$95,148 \times 5 = \$475,740$ ).

**CROSS AGENCY WORKING RELATIONSHIPS****OBSERVATION 10-G**

**Metropolitan Nashville Public Schools Technology and Information Services Department and the City of Nashville's Metropolitan Information Technology Services Department do not have a positive working relationship.**

The mission of Metropolitan Information Technology Services Department is to provide information, communication and business solutions to the departments and agencies of the Metropolitan Government so that they can achieve their business objectives. The Department supports more than 50 departments and agencies that include police, judicial, sheriff, fire, airport, and the hospital system.

Also, Metropolitan Information Technology Services hosts and supports the Oracle Enterprise Business Solution (EBS) used by the School System. However, this support is viewed as inadequate and unresponsive due to the unique and time-sensitive requirements of the School System. Therefore, it is the perception within the School System that Metropolitan Information Technology Services is insensitive and unwilling to make changes to the Oracle system to accommodate their unique requirements. Although Metropolitan Technology and Information Services Department has a person assigned to help support the Oracle system, it is difficult to make required changes due to access restrictions. This has led to a lack of trust and frustration between the two organizations.

A service-level agreement (SLA) between the School System and Metropolitan Information Technology Services would address this issue, but one has not been executed. A service-level agreement is a written document describing the expected level of service, the metrics by which the service is measured, and the remedies if the agreed-upon service level is not achieved.

The School System and Metropolitan Information Technology Services do not have a good line of communication. This situation results in School System personnel concluding that they are denied input on major decisions that could affect the School System. A recent example is the Kickoff of the Open Data Initiative where no one in the School System was aware or involved until the chief financial officer received an e-mail and followed up to inquire about the situation. However, Metropolitan Information Technology Services believes there are forums available to school personnel to provide their input and express their concerns but they choose not to participate. Metropolitan Information Technology Services holds regularly scheduled governance meetings to discuss all aspects of events within the department but, according to Metropolitan Information Technology Services, there is seldom representation from the School System.

However, the Kronos (Automated Time and Attendance System) Project is a joint initiative that is progressing with good results. The project team is comprised of representatives from the School System and Metropolitan Nashville Government that have participated in all phases of the project from planning through implementation. Thus far, the project is progressing on schedule with the required participation from both parties.

#### **RECOMMENDATION 10-G.1**

**Form a task force of key stakeholders from the School System and Metropolitan Government to address and resolve issues with the Oracle Enterprise Business Solutions (EBS) that impacts the school district's requirements.**

The areas that should have representation, but are not limited to include the following:

- Metropolitan Nashville Public Schools
  - Finance;
  - Purchasing;
  - Warehousing;
  - Human Capital; and
  - Technology and Information Services.

- Metropolitan Nashville Government
  - Finance; and
  - Information Technology Services.

The task force will be responsible for addressing and resolving all issues with the Oracle Business Solutions (EBS) that impact the School System and prioritize and monitor any application/system changes that may be required. The Task Force should meet at least quarterly or more often if needed.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

#### **RECOMMENDATION 10-G.2**

**Develop a service-level agreement (SLA) between the School System’s Technology and Information Services Department and Metropolitan Nashville Government’s Information Technology Department based on input from the task force to ensure that support and services provided meet expectations.**

Based on best practices, a service-level agreement should consist of the following (which may not all apply):

- definition of services;
- performance measurements;
- problem management;
- customer duties;
- warranties;
- disaster recovery; and
- termination of agreement.

Performance measured against the service-level agreement (SLA) should be monitored and reviewed on a regular basis.

The executive director of Technology and Information Services should collaborate with the director of Metropolitan Information Technology Services to develop a service-level agreement (SLA) that addresses the performance and support requirements of the School System.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

#### **RECOMMENDATION 10-G.3**

**Represent the School System’s Technology and Information Services Department at all governance meetings held by Metropolitan Information Services Department.**

The executive director of Technology and Information Services Department or his designee should attend all pertinent meetings held by the Metropolitan Information Services Department. The representative must be authorized to discuss and provide input on issues and projects that will impact the School System.

#### **FISCAL IMPACT**

This recommendation can be implemented with existing resources.

### **POLICIES AND PROCEDURES**

#### **OBSERVATION 10-H**

**The School System lacks documented policies and procedures to govern the support activities of the technical staff.**

Documented policies and procedures provide clear direction and guidelines to the technical staff on how to go about performing support activities. Without documented policies and procedures, technical support may be carried out in an inconsistent, ineffective, and insufficient manner. This could lead to performance issues with the School System's technology resources such as email, electronic file, and Internet access. Not having documented policies and procedures leaves the School System unprepared for emergencies and other problems that challenge the technical staff. Based on interviews with the technical staff, the School System has suffered some inefficiency in support because of lack of policies and procedures.

Also, documented policies and procedures provide the School System protection from loss of knowledge in the case of staff turnover. At the same time, the documented policies and procedures can facilitate assimilation of new staff or new assigned staff responsibilities in the most effective way.

The Technology and Information Services Department has developed a framework for departmental standard operating procedures. However, no documented department operational policies and procedures have been developed.

Sumter District Schools in Bushnell, Florida provides an example of a well-structured and comprehensive information technology policies and procedures manual. **Exhibit 10-20** and on the next page shows the Table of Contents for suggested content.

**Exhibit 10-20**  
**Sumter District Schools**  
**Information Technology Policies and Procedures Manual Table of Contents**

- I. PURPOSE
- II. ACCESS TO POLICY
- III. OWNERSHIP AND USE OF INFORMATION TECHNOLOGY RESOURCES
  - a. Technology Equipment
  - b. Software
- IV. GUIDELINES FOR THE USE OF TECHNOLOGY RESOURCES
  - a. Technology Acceptable Use
  - b. Network Security and Safety Guidelines
  - c. Access to Technology Resources
  - d. User Accounts
  - e. Passwords
    - 1. Disclosure of Passwords
  - f. Network Management and Security
  - g. Bandwidth
  - h. Hacking
  - i. Network Infrastructure and Communications Closets
  - j. Network Address Assignment and Dynamic Host Configuration Protocol (DHCP)
  - k. Domain Name Registration
  - l. Wireless Networks
  - m. Anti-Virus/Anti Malware/SPAM Control/Patch Management
- V. MOBILE DEVICE SECURITY
  - a. Policy Statement
  - b. Definition
  - c. Confidential Information
- VI. ELECTRONIC MAIL
- VII. WEB PUBLISHING
  - a. Responsibilities
  - b. Design and Development Guidelines
- VIII. DATA LOSS PREVENTION: NETWORK AND INSTRUCTIONAL TECHNOLOGY
  - a. Policy Statement
  - b. Backup Strategies
  - c. Physical Security
  - d. Confidential Information
  - e. Server and Storage Classification
- IX. SECURITY INCIDENT RESPONSE: NETWORK AND INSTRUCTIONAL TECHNOLOGY
  - a. Incident severity classification
  - b. Investigations
    - 1. Student
    - 2. Staff
  - c. Alerts and Advisories

Source: Sumter District Schools, Bushnell, Florida, July 2013.

**RECOMMENDATION 10-H.1****Develop policies and procedures to govern and guide technology support activities.**

The executive director of Technology and Information Services and his management team should identify functions and activities that require a policy or procedure to be effective. A plan should be developed to document and publish the documented policies and procedures incorporating standards, as appropriate. The policies and procedures should be written by the executive director and/or his designees. The written policies and procedures should be reviewed and approved by the Technology and Information Services management team. They should be included in the standard operating procedures manual and posted on the School System's and schools' websites.

**FISCAL IMPACT**

This recommendation can be implemented with existing resources.

## ALTERNATIVE SOURCING AND LEVERAGING OPPORTUNITIES

### LEVERAGING METROPOLITAN NASHVILLE GOVERNMENT

The review team explored whether there would be a strategic advantage to consolidating the School System's Technology and Information Services Department with Metropolitan Information Technology Services Department. We found that many of the discounted and free offerings afforded to school districts by various vendors such as Dell, Microsoft, and others would not be available if the School System's technology services were being provided by Metropolitan Information Technology Services Department. In addition, and most importantly, any equipment and services funded by the federal E-Rate program that is used to provide the communications and Internet access infrastructure for the School System can only be used by the School System. The federal E-Rate funds and the equipment and services purchased with those funds cannot be co-mingled. As a result, these benefits could not be realized if the two groups merged.

There are also issues related to providing support for the unique and time-sensitive requirements of the School System. A recent example is the requirement for the School System to have student email accounts. Metropolitan Information Technology Services would not allow student email accounts in their active directory. This situation led the School System to transfer email in-house thus taking advantage of a free Microsoft offering, Office 365, which not only satisfied the School System's email requirement but resulted in a reduction in email cost. The executive director of Technology and Information Services Department was quoted in EdTech magazine as saying, "With Office 365, we secured larger mailboxes for district users and gained antivirus and anti-spam protection, without spending a dime". After absorbing initial startup and transfer costs of approximately \$425,000, the School System's allocation for email hosting and support from Metropolitan Information Technology Services will be reduced by approximately \$500,000 per year.

Based upon the review team's assessment, there is no strategic or economic advantage to consolidating the School System's Technology and Information Services Department with the Metropolitan Information Technology Services Department.

The School System is currently leveraging Metropolitan Information Technology Services Department to provide its business applications (Human Capital, Payroll, Finance, Purchasing) using the Oracle Enterprise Business System (EBS). Based on the review team's assessment this arrangement should remain in place, but there are improvements to the service provided to the School System that should be addressed through the implementation of **Recommendation 10-G.2**.

Based on the review team's assessments, there is no other alternative sourcing or leveraging opportunities that would result in operational efficiency or cost-savings for the School System.

## FISCAL IMPACT SUMMARY

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 10: TECHNOLOGY MANAGEMENT</b>								
10-A.1	Adopt a staffing methodology to assess and determine the appropriate staffing level for the technical support specialists required to provide adequate support to the schools.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10-A.2	Develop a staffing plan to address any staffing shortfalls as a result of the assessments using the adopted staffing methodology.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10-A.3	Develop key performance indicators with targets to measure the effectiveness of the technology support provided to the schools.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10-B.1	Research, assess, and develop a comprehensive five-year long-range technology plan.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10-B.2	Develop a detailed hardware migration and replacement strategy that would integrate with the five-year long-range technology plan.	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**FISCAL IMPACT SUMMARY (Cont'd)**

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 10: TECHNOLOGY MANAGEMENT</b>								
<b>10-C.1</b>	Appoint a dedicated technology security officer to ensure that its information security needs are met.	(\$70,000)	(\$70,000)	(\$70,000)	(\$70,000)	(\$70,000)	(\$350,000)	\$0
<b>10-D.1</b>	Develop plans to redesign and implement new websites for the School System and schools.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>10-D.2</b>	Redesign and implement new websites using SharePoint as the platform.	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$90,000	\$0
<b>10-E.1</b>	Establish a disaster recovery team.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>10-E.2</b>	Revisit the selection of the planned location to house the backup computing facility.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>10-F.1</b>	Develop a professional development and training program for the technical staff that would be incorporated into the performance evaluation process.	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**FISCAL IMPACT SUMMARY (Cont'd)**

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 10: TECHNOLOGY MANAGEMENT</b>								
<b>10-F.2</b>	Establish a training budget to ensure the technical staff has the appropriate knowledge and skills to perform their job responsibilities.	(\$95,148)	(\$95,148)	(\$95,148)	(\$95,148)	(\$95,148)	(\$475,740)	\$0
<b>10-G.1</b>	Form a task force of key stakeholders from the School System and Metropolitan Government to address and resolve issues with the Oracle Enterprise Business Solutions (EBS) that impacts the school district's requirements.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>10-G.2</b>	Develop a service-level agreement (SLA) between the School System's Technology and Information Services Department and Metropolitan Nashville Government's Information Technology Department based on input from the task force to ensure that support and services provided meet expectations.	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**FISCAL IMPACT SUMMARY (Cont'd)**

RECOMMENDATION		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 10: TECHNOLOGY MANAGEMENT</b>								
<b>10-G.3</b>	Represent the School System's Technology and Information Services Department at all governance meetings held by Metropolitan Information Services Department.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>10-H.1</b>	Develop policies and procedures to govern and guide technology support activities.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTALS-CHAPTER 10</b>		<b>(\$147,148)</b>	<b>(\$147,148)</b>	<b>(\$147,148)</b>	<b>(\$147,148)</b>	<b>(\$147,148)</b>	<b>(\$735,740)</b>	<b>\$0</b>

## Management Response

TECHNOLOGY MANAGEMENT

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
Management of Metropolitan Nashville Public Schools should:			
10-A.1	Adopt a staffing methodology to assess and determine the appropriate staffing level for the technical support specialists required to provide adequate support to the schools.	<b>Partially Accept</b> MNPS agrees with this recommendation and notes the district already has such a methodology. The Learning Technology Plan outlines the needs for staffing based on industry standards. The support: devices ratio that is recommended is not a realistic goal for the district.	Already in place
10-A.2	Develop a staffing plan to address any staffing shortfalls as a result of the assessments using the adopted staffing methodology.	<b>Partially Accept</b> See above. A more workable solution is to invest in technologies that will provide customer support.	Already in place
10-A.3	Develop key performance indicators with targets to measure the effectiveness of the technology support provided to the schools.	<b>Reject</b> The district already uses the Council of the Great City Schools' suggested Key Performance Indicators (KPIs).	N/A
10-B.1	Research, assess, and develop a comprehensive five-year long-range technology plan.	<b>Accept</b> The plan was developed during the 2012-2013 school year and is in implementation.	Already in place
10-B.2	Develop a detailed hardware migration and replacement strategy that would integrate with the five-year long-range technology plan.	<b>Partially Accept</b> MNPS agrees with this recommendation and notes that hardware migration and replacement is funded by the capital budget. Allocation of funds is based on Mayor and Council Approval. Funding is available for some years, but not in others. This makes it difficult to plan long-term. Current strategy is to use hardware until "end of life" and refresh as needed.	Already in place
10-C.1	Appoint a dedicated technology security officer to ensure that its information security needs are met.	<b>Accept</b> Funding for a security officer position will be included in the 2015-2016 Budget Request	July 2015
10-D.1	Develop plans to redesign and implement new websites for the School System and schools.	<b>Accept</b> Blackboard Engage has been selected by the Communications Department and Learning Technology Department as the platform for all new district and school websites. Rollout of the new district website occurred in late October 2014 with school websites being	October 2014 through August 2015

## Management Response

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		upgraded over the next six months to a year.	
10-D.2	Redesign and implement new websites using SharePoint as the platform.	<b>Reject</b> After a thorough review of SharePoint and other web platforms, Blackboard Engage was selected by the Communications Department and Learning Technology Department as the platform for all new district and school websites. See 10-D.1 response.	N/A
10-E.1	Establish a disaster recovery team.	<b>Partially Accept</b> A disaster recovery plan does exist for the Department of Technology and Information Services. Development and implementation of a district level plan will require a commitment from all departments, as well as a dedicated FTE (possibly the Security FTE mentioned in 10-C.1).	Already in place
10-E.2	Revisit the selection of the planned location to house the backup computing facility.	<b>Accept</b> A cost/benefit analysis will be performed.	Summer 2015
10-F.1	Develop a professional development and training program for the technical staff that would be incorporated into the performance evaluation process.	<b>Accept</b> Plans are being formulated to address the professional support/training needs of all support personnel. The Technology & Information Services (TIS) Department will be included.	July 2015
10-F.2	Establish a training budget to ensure the technical staff has the appropriate knowledge and skills to perform their job responsibilities.	<b>Accept</b> Request for funding will be included in next budget year.	July 2015
10-G.1	Form a task force of key stakeholders from the School System and Metropolitan Government to address and resolve issues with the Oracle Enterprise Business Solutions (EBS) that impacts the school district's requirements.	<b>Partially Accept</b> The district will investigate the feasibility of this recommendation, which would require involvement of the district's Technology Information Services, Business Office, Purchasing, and Human Capital departments, as they are the primary users of EBS, as well as Metro Government ITS.	July 2015
10-G.2	Develop a service-level agreement (SLA) between the School System's Technology and Information Services Department and Metropolitan Information Technology Department based on input from the task force to ensure that the support and services	<b>Partially Accept</b> The Technology Information Services Department can assist with developing SLAs for the departments referenced in 10-G.1	TBD

## Management Response

TECHNOLOGY MANAGEMENT

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
	provided meet expectations.		
10-G.3	Represent the School System's Technology and Information Services Department at all governance meetings held by Metropolitan Information Services Department.	<b>Accept</b> Metro Schools is now included in Metro ITS meetings where pertinent issues with potential impact to MNPS will be discussed.	January 2015
10-H.1	Develop policies and procedures to govern and guide technology support activities.	<b>Accept</b> MNPS agrees with this recommendation and notes the district has numerous policies and procedures in place to govern and guide the use of technology. They are reviewed annually to ensure they are kept current.	Already in place

## CHAPTER 11 – ANALYSIS OF EDUCATIONAL SPENDING

### OBJECTIVES

The objectives of this chapter are to use Metropolitan Nashville Public Schools (the School System) expenditure data from 2012-2013 to perform the following:

- benchmark and analyze the School System’s total and school-level expenditures;
- group and analyze expenditures using applicable functional classifications such as those defined by the National Center for Education statistics classification of expenditures, which include instruction, support services, operation of non-instructional services, facilities acquisition and construction, and debt services);
- group and analyze expenditures using direct classroom, indirect classroom, and administrative classifications;
- analyze total costs and costs per student across various cost categories and classifications; and
- compare expenditures to selected peer districts and National Center for Education expenditure data.

### CHAPTER HIGHLIGHTS

- Students, employees, and facilities are the chief drivers of educational spending.
- Sixty-two cents of each dollar the School System spends is for general purpose spending.
- Seventy-two cents of every general purpose dollar goes towards instruction.
- Sixty-five cents of every general purpose dollar is spent directly at the school level.
- The School System spends a total of \$14,747 per student overall and spends \$5,870 per student directly at the school level.
- The Maplewood cluster spends the most per student while the Cane Ridge cluster spends the least.
- Schools with higher percentages of students eligible for free and reduced-lunch tend to spend more per student.
- Four of the five clusters with the highest cost per student have a majority of African American students. One of the five has a majority of Caucasian students.
- The School System tends to invest more General Fund Purpose dollars in the poorest and lowest academically performing schools.

**Exhibit 11-1** provides an overview of the analyses performed in this chapter and the research questions such analyses are intended to address.

**Exhibit 11-1**  
**Overview of Educational Spending Analyses**

Expenditure Description	Research Questions Addressed	Exhibit
School System staff	Personnel costs comprise the bulk of school district expenditures. What is the composition of the School System’s staff?	<b>Exhibit 11-2</b>
Student enrollment	Students drive school district costs. What is the School System’s student enrollment?	<b>Exhibit 11-3</b>
Student ethnicity and economic status	The School System’s goal is to ensure that adequate and equitable funding is available to provide every student with the foundation of knowledge, skills, and character necessary to excel in higher education, work, and life. What is the ethnic and economic composition of the School System’s student population?	<b>Exhibit 11-4</b>

**Exhibit 11-1  
Overview of Educational Spending Analyses (Cont'd)**

<b>Expenditure Description</b>	<b>Research Questions Addressed</b>	<b>Exhibit</b>
Total School System expenditures	How much money does the School System spend and for what purposes?	<b>Exhibit 11-5</b>
Detail of general purpose funds by major function and object	General purpose expenditures comprise the bulk of school spending. On what activities and for what purposes are general purpose funds spent and in what proportions?	<b>Exhibits 11-6 and 11-7</b>
Direct and indirect classroom General Purpose Fund expenditures	How much is spent directly in the classroom educating students and how much is spent for indirect support of classroom instruction and administration? For what activities and purposes are direct and indirect expenditures being spent?	<b>Exhibits 11-8 through 11-10</b>
Direct and indirect General Purpose fund expenditures by school type	How much is spent in the classroom per student and in total for elementary, middle, and high schools?	<b>Exhibits 11-11 through 11-13</b>
Detail of special school General Purpose Fund expenditures	Which schools are classified as special? What is their purpose and how much is being spent in these schools?	<b>Exhibit 11-14</b>
School cluster map	What clusters are in the School System and where are they located in proximity to one another?	<b>Exhibit 11-15</b>
School cluster profile	How many schools are in each cluster by school type?	<b>Exhibit 11-16</b>
Cost per student by cluster	What is the cost per student for each cluster? How do such costs compare to the School System's average cost per student?	<b>Exhibit 11-17</b>
Cost per student and percentage of students on free and reduced-lunch—by school and school type	Do schools with higher percentages of economically disadvantaged students spend more, less, or the same per student as schools with lower percentages of economically disadvantaged students?	<b>Exhibits 11-18 through 11-20</b>
Cost per student and percentage of students on free and reduced-lunch—by cluster	Do clusters with higher percentages of economically disadvantaged students spend more, less, or the same per student as clusters with lower percentages?	<b>Exhibit 11-21</b>
Cost per student and student ethnicity—by school	Do schools with higher percentages of minority students spend more, less, or the same per student as schools with higher majority student populations?	<b>Exhibit 11-22</b>
Cost per student and student ethnicity—by cluster	Do clusters with higher percentages of minority students spend more, less, or the same per student as clusters with higher majority student populations?	<b>Exhibit 11-23 and 11-24</b>
Academic performance measures	What academic performance measures were used in this analysis?	<b>Exhibits 11-25 and 11-26</b>
Cost per student and academic performance—by cluster	Do clusters with lower academic performance ratings spend more, less, or the same per student as clusters with higher academic performance ratings?	<b>Exhibits 11-27 and 11-28</b>
Cost per student among academically poor performing schools within the cluster	How much do poor performing schools within a cluster spend in comparison to other schools within the cluster?	<b>Exhibit 11-29</b>

**Exhibit 11-1  
Overview of Educational Spending Analyses (Cont'd)**

<b>Expenditure Description</b>	<b>Research Questions Addressed</b>	<b>Exhibit</b>
Cost per student among academically poor performing schools among clusters	How much do poor performing schools in one cluster spend in comparison to poor performing schools in other clusters?	<b>Exhibit 11-29</b>
Cost per student and demographics of academically poor performing schools-by cluster	What are the differences in cost per student among those clusters with schools that perform poorly academically and also have high concentrations of minority and economically disadvantaged students?	<b>Exhibit 11-30</b>
Peer districts	What peer districts were selected for this analysis?	<b>Exhibit 11-31</b>
School System and Peer district total expenditures	How do total expenditures of the School System compare with those of selected peer districts?	<b>Exhibit 11-32</b>
School System and peer district total, general purpose, and debt expenditures per student	How do total, general purpose and debt expenditures per student compare with those of selected peer districts?	<b>Exhibit 11-33</b>
School System and peer district general purpose expenditures by function	How do general purpose expenditures by function compare with those of selected peer districts?	<b>Exhibit 11-34</b>
National Center for Education Statistics comparisons	How does the School System compare with selected peer districts using National Center for Education expenditure data?	<b>Exhibits 11-35</b>

*Source: McConnell Jones Lanier & Murphy LLP Review Team.*

## BACKGROUND

The review of the School System's expenditures included interviews with individuals in the following positions:

- chief financial officer;
- director, financial reporting and budgeting; and
- director, operational innovation-office of innovation.

The School System maintains accountability for financial resources using accounting entities known as funds. Funds are used to organize and classify monies and include asset, liability, revenue, and expenditures in self-balancing accounts. Fund accounting segregates funds according to their intended purpose and is used to aid management in demonstrating compliance with finance-related legal and contractual obligations.

All the School System's expenditures have a business unit code. Each school is a business unit under which expenditures are identified, captured, accounted for, and reported.

These expenditures are the main focus of this expenditure analysis primarily using 2012-2013 General Purpose Fund expenditures.

Certain retirees' benefits including health, pension, life insurance, and other expenses totaling \$24,000,000 for 2012-2013 were borne by Metropolitan Nashville Government on behalf of the School System. Such costs were not paid by the School System and were excluded from this analysis.

While various observations are made throughout the analysis of the School System's expenditures, the following constraints should be noted as follows:

- peer school—level data was not available for comparison with the School System's school—level data;
- differences in how peer districts and the School System categorize expenditures into functional categories such as Instruction, Support, and Administration could affect comparability;
- charter school expenditures were not available and are not included in the analysis;
- there are differences in the composition of enrollment between the peers and the School System that could affect comparability. For example, the School System enrollment does not include charter school students whereas in some instances peer district enrollment includes charter school students; and
- the most recent data available from the National Center for Education Statistics is for the 2010-2011 School Year and is therefore less useful for making comparisons and drawing conclusions because the information is dated.

The first step in this analysis was to obtain selected School System's demographics that drive expenditures such as the number of staff, schools, and students. We also obtained student ethnicity and free and reduced-lunch eligibility information. This data provided the metrics for calculating per student

expenditures by type while providing a sense of the size and make-up of the School System and its student population.

Personnel-related expenditures make up the majority of costs in school districts. The School System had a total of 6,326 certified staff during 2013-2014 representing 63 percent of total staff. This number includes 5,167 certified teachers, which is 82 percent of the certificated staff total of 6,326 and 51 percent of total staff of 10,120. Support staff comprises 37 percent of total staff. **Exhibit 11-2** presents the School System's staff composition.

**Exhibit 11-2  
Metropolitan Nashville Public Schools' Staff  
2013-2014**

Staff Category	2013-2014	Percent of Staff
Certificated Teachers	5,167	51%
Principals/Assistant Principals	289	3%
Coordinators/Directors	87	1%
Guidance Counselors	241	2%
Coaches/Specialists	310	3%
Librarians	131	1%
Social Workers/Psychologists	101	1%
<b>Total Certificated Staff</b>	<b>6,326</b>	<b>63%</b>
Support Staff	3,794	37%
<b>Total Staff</b>	<b>10,120</b>	<b>100%</b>

Source: Metropolitan Nashville Public Schools 2013-2014 FACTS Publication.

**Exhibit 11-3** shows the number of schools and student enrollment for the School System for 2012-2013. Elementary schools had the highest enrollment with 36,944 pupils, representing 48 percent of total enrollment. As is typical in school district, elementary schools represent the highest number of schools with 73, which is nearly half of all schools.

**Exhibit 11-3  
Student Enrollment by School Type  
2012-2013**

School Type	Number	Percent of Schools	Number Enrolled	Percentage
Elementary	73	49%	36,944	48%
Middle	34	23%	19,657	25%
High Schools	22	15%	19,803	25%
Special Schools	19	13%	1,481	2%
<b>Total</b>	<b>148</b>	<b>100%</b>	<b>77,885</b>	<b>100%</b>

Source: Metropolitan Nashville Public Schools, February 2014. Enrollment numbers vary slightly depending on timing and source. School numbers may vary depending on how nontraditional schools are classified. These numbers do not include charter schools.

The demographics of the School System show that the largest ethnic group in the student population is African American at 45 percent. Caucasians and Hispanics are the next largest ethnic groups, representing 32 percent and 19 percent, respectively. **Exhibit 11-4** provides a breakdown of the ethnicity of the School System's student population.

**Exhibit 11-4**  
**Student Ethnicity**

Ethnicity	Percentage of Total
African American	45%
Caucasian	32%
Hispanic	19%
Asian	4%
Native American	<1%
Pacific Islander	<1%
*Economically Disadvantaged	72%

*Source: Metropolitan Nashville Public Schools 2013-2014 FACTS Publication.*

*\*The source for this number is the 2013-2014 Budget Book, page 23, which also agrees with free and reduced-price lunch data provided by the School System.*

*Note: Percentages may not add to 100 percent due to rounding.*

## TOTAL SCHOOL SPENDING

The School System's expenditures are organized into the following fund categories: governmental funds, non-major governmental funds, and proprietary funds. These funds are described as follows:

**Major Governmental Funds** – Most of the School System's expenditures are accounted for in governmental funds, which generally focus on how current financial resources flow in and out of the School System. Governmental fund financial statements show how basic services, such as regular and special education are financed in the short term, as well as what remains for future spending. They include the following:

- *General Purpose Fund* – the chief operating fund of the School System.
- *Debt Service Fund* – accounts for the accumulation of resources for and the payment of general long-term debt principal and interest.

### Non-major Governmental Funds

- *Nutritional Service Fund (Special Revenue Fund)* – accounts for the food service operations of the School System.
- *Federal, State, and Local Grants (Special Revenue)* – accounts for a variety of programs supporting educational activities that are supported by various state and federal grant programs.

**Proprietary Funds** – Used to account for the School System's ongoing activities that are similar to those in the private sector. They include:

- *School Self Insurance* – used to pay for general liability claims, vehicular liability claims and administrative claims.
- *School Print Shop* – used to account for the operations of printing services.
- *Professional Employees' Insurance* – used for the accumulation of assets for the payment of self-insured medical claims.

As **Exhibit 11-5** shows, the School System's expenditures for all funds totaled \$1,148,535,289 for 2012-2013. General Purpose and Debt Service Fund expenditures comprised 81 percent of all School System expenditures. The General Purpose Fund is the chief operating fund for the School System. It comprises 62 percent of total School System expenditures and is the focus of the analyses performed in this chapter.

**Exhibit 11-5**  
**Total Expenditures All Funds**

Fund	Expenditures	Percentage of Total
General Purpose	\$ 714,441,258	62%
Debt Service	214,347,452*	19%
Nutritional Services	37,768,985	3%
Federal, State, and Local Grants	88,369,468	8%
School Self Insurance	587,412	0%
School Print Shop	552,044	0%
Professional Employee Insurance	92,468,670	8%
<b>Total</b>	<b>\$ 1,148,535,289</b>	<b>100%</b>

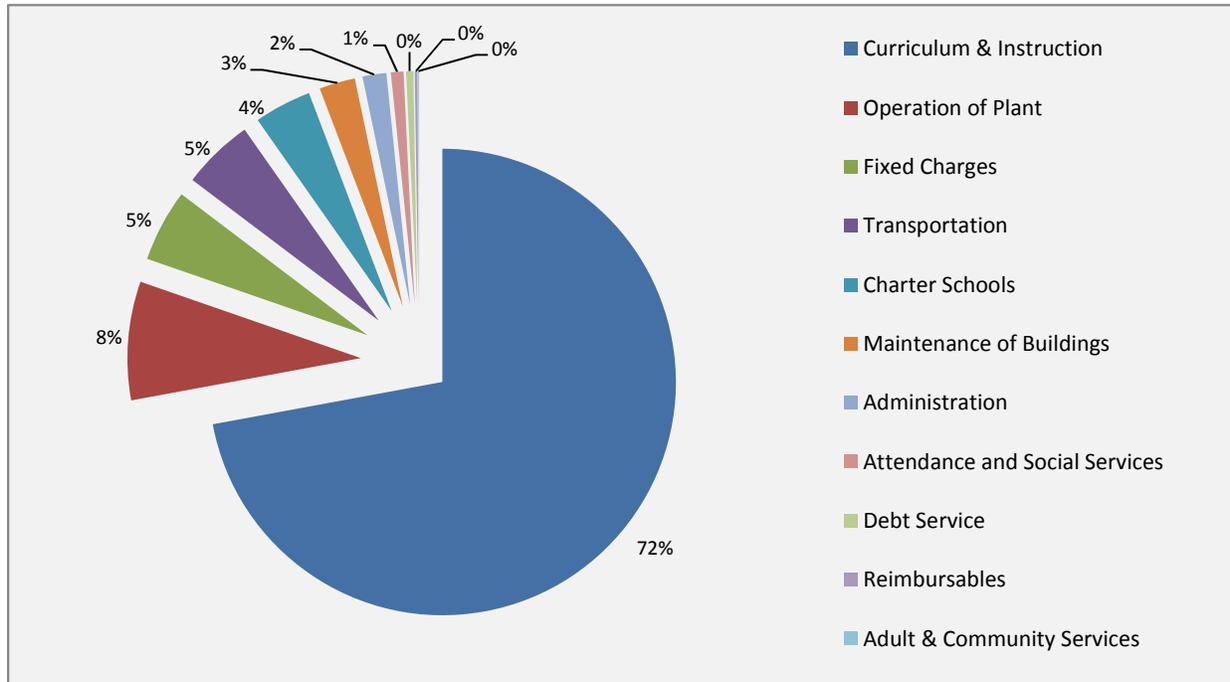
Source: Metropolitan Nashville Public Schools 2013-2014 Budget Book, page 36.

\* This amount includes \$51,817,449 of principal and interest on School System debt. The balance of \$162,530,003 represents debt refunding and new debt issuance expenses.

The School System accumulates expenditures by function and object. Function refers to an activity such as instruction, operation of plant, and transportation. Object refers to expenditure's nature or purpose, such as teacher salaries and employee benefits.

**Exhibit 11-6** provides a breakdown of General Purpose Fund expenditures by function. The exhibit shows that 72 percent of total General Purpose Fund expenditures were for instruction and curriculum while 8 percent was for operation of plant. Fixed charges, which represent 5 percent of General Purpose Fund expenditures, is primarily for insurance, retirement, and other employee benefits. Transportation comprises another 5 percent of General Purpose Fund expenditures while charter school payments comprise 4 percent.

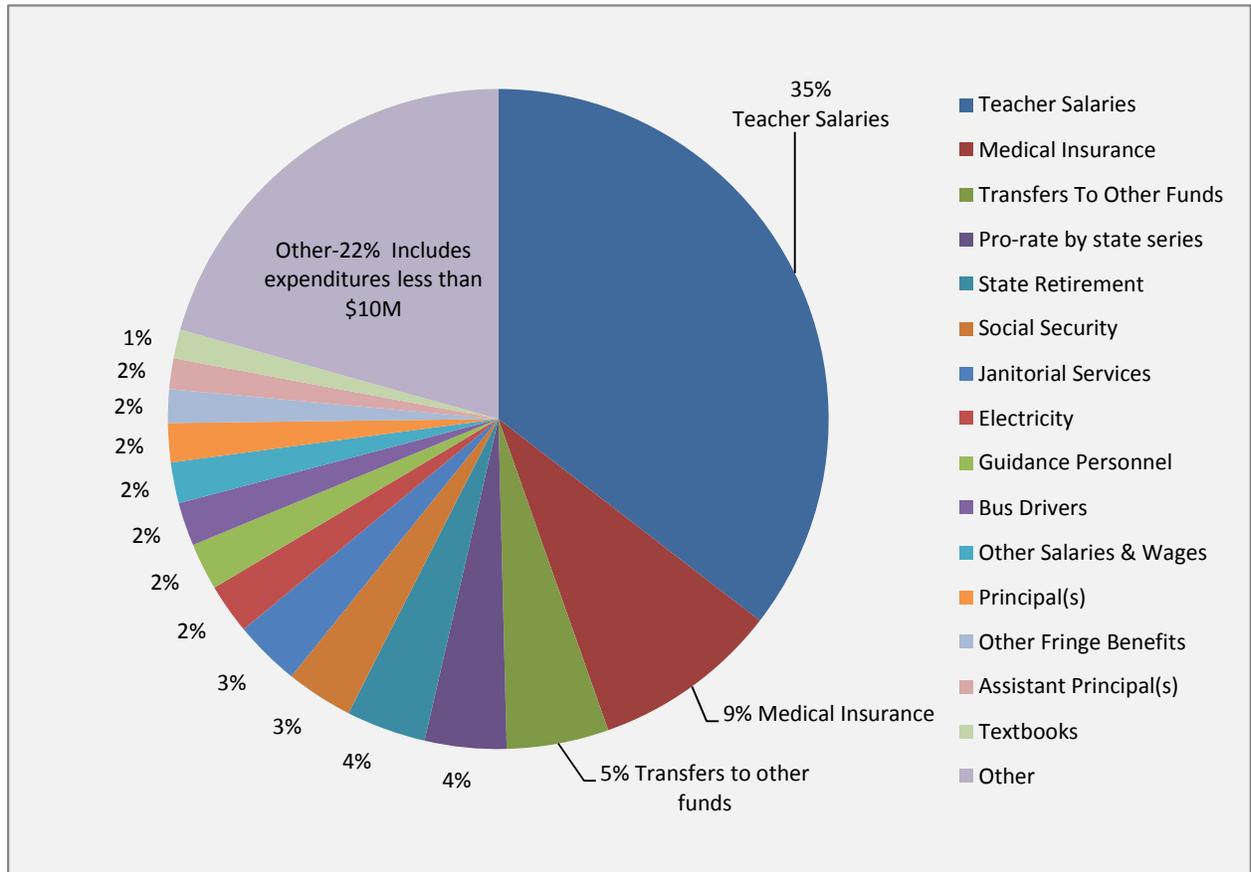
**Exhibit 11-6**  
**Overview of General Purpose Expenditures by Function**  
**2012-2013**



Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures.

**Exhibit 11-7** provides an overview of General Purpose Fund expenditures by object for 2012-2013. Only expenditure categories exceeding \$10,000,000 are shown. The remaining expenditures are summarized in the “Other” category. Teacher salaries comprise 35 percent of General Purpose Fund expenditures, followed by “Other” at 22 percent. Medical insurance is third at 9 percent.

**Exhibit 11-7**  
**Overview of General Purpose Expenditures by Object**  
**2012-2013**



Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures.

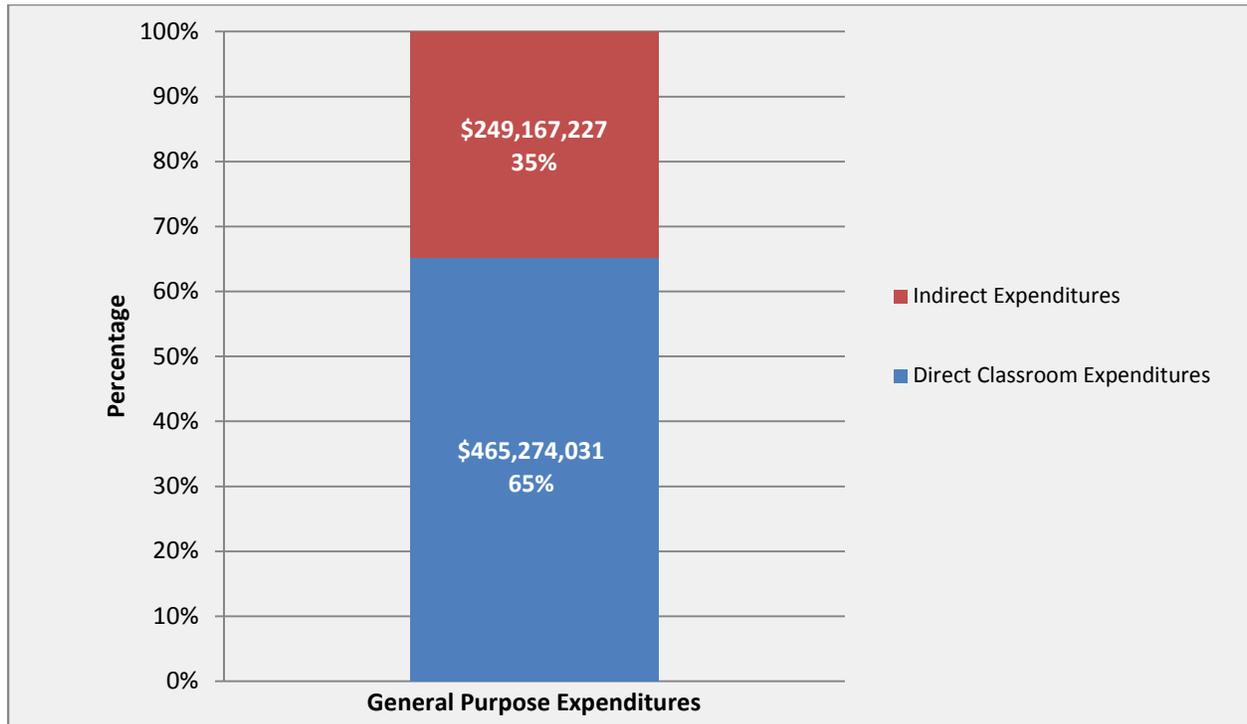
For purposes of this analysis, General Purpose Fund expenditures are classified into two broad categories described as shown below. Administrative costs are included in indirect costs:

- Direct classroom cost—directly and routinely impact students in classrooms such as teachers and principal compensation. For purposes of this analysis, direct classroom costs are considered to be any costs directly charged to a specific school.
- Indirect cost—indirectly support, such as transportation, information technology infrastructure, and building maintenance and repair. Indirect costs while supporting the schools are not charged to a specific school. This category also includes administrative costs, which are costs that do not directly or indirectly serve students such as management and supervision, benefits management, human resources, and public relations.

Approximately \$465,274,031 or 65 percent of total General Purpose Fund expenditures are incurred directly at the school level. This amount includes the special schools. The remaining \$249,167,227 or 35 percent, while benefiting the schools, are indirect and as such are not charged to specific school

accounts. **Exhibit 11-8** illustrates the composition of General Purpose Fund expenditures by direct classroom expenditures and indirect costs for 2012-2013.

**Exhibit 11-8  
Direct Classroom and Indirect General Purpose Fund Expenditures  
2012-2013**



Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures.

When analyzed by function, 95 percent of direct classroom expenditures are for instruction, while 29 percent of indirect costs are for instruction. Operation of plant comprises 5 percent of direct classroom expenditures and 15 percent of indirect costs. Administrative costs comprise 7 percent of indirect costs and 2 percent of total general purpose expenditures. **Exhibit 11-9** provides direct classroom and indirect costs by function for 2012-2013.

**Exhibit 11-9  
Detail of Direct and Indirect General Purpose Expenditures by Function  
2012-2013**

Function	Direct Classroom	Percent	Indirect Costs	Percent	Total	Percent
Curriculum & Instruction	\$442,584,691	95%	\$72,533,727	29%	\$515,118,418	72%
Operation of Plant	\$21,490,728	5%	\$37,139,326	15%	\$58,630,054	8%
Fixed Charges	\$828,145	<1%	\$34,899,747	14%	\$35,727,892	5%
Transportation	\$0	0%	\$35,426,713	14%	\$35,426,713	5%
Charter Schools	\$0	0%	\$28,235,589	11%	\$28,235,589	4%

**Exhibit 11-9  
Detail of Direct and Indirect General Purpose Expenditures by Function  
2012-2013 (Cont'd)**

Function	Direct Classroom	Percent	Indirect Costs	Percent	Total	Percent
Administration	\$0	0%	\$11,789,532	7%	\$11,789,532	2%
Maintenance of Buildings	\$0	0%	\$17,853,755	5%	\$17,853,755	2%
Attendance and Social Services	\$0	0%	\$6,217,006	3%	\$6,217,006	1%
Adult & Community Services	\$370,467	<1%	\$72,191	1%	\$442,658	<1%
Debt Service	\$0	0%	\$3,500,000	1%	\$3,500,000	<1%
Reimbursables	\$0	0%	\$1,499,641	0%	\$1,499,641	<1%
<b>Grand Total</b>	<b>\$465,274,031</b>	<b>100%</b>	<b>\$249,167,227</b>	<b>100%</b>	<b>\$714,441,258</b>	<b>100%</b>

Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures.

Note: Percentages may not add to 100 percent due to rounding.

When analyzed by object, 54 percent of direct classroom expenditures are for teacher salaries, while 1 percent of indirect costs are for teacher salaries. Medical insurance comprises 11 percent of direct classroom expenditures and 6 percent of indirect costs. State retirement expenditures comprise 6 percent of direct classroom expenditures. **Exhibit 11-10** provides direct classroom and indirect costs by object. Costs greater than \$10,000,000 are categorized separately; costs less than \$10,000,000 are grouped together as "Other" (under \$10,000,000).

**Exhibit 11-10  
Detail of Direct and Indirect General Purpose Expenditures by Object  
2012-2013**

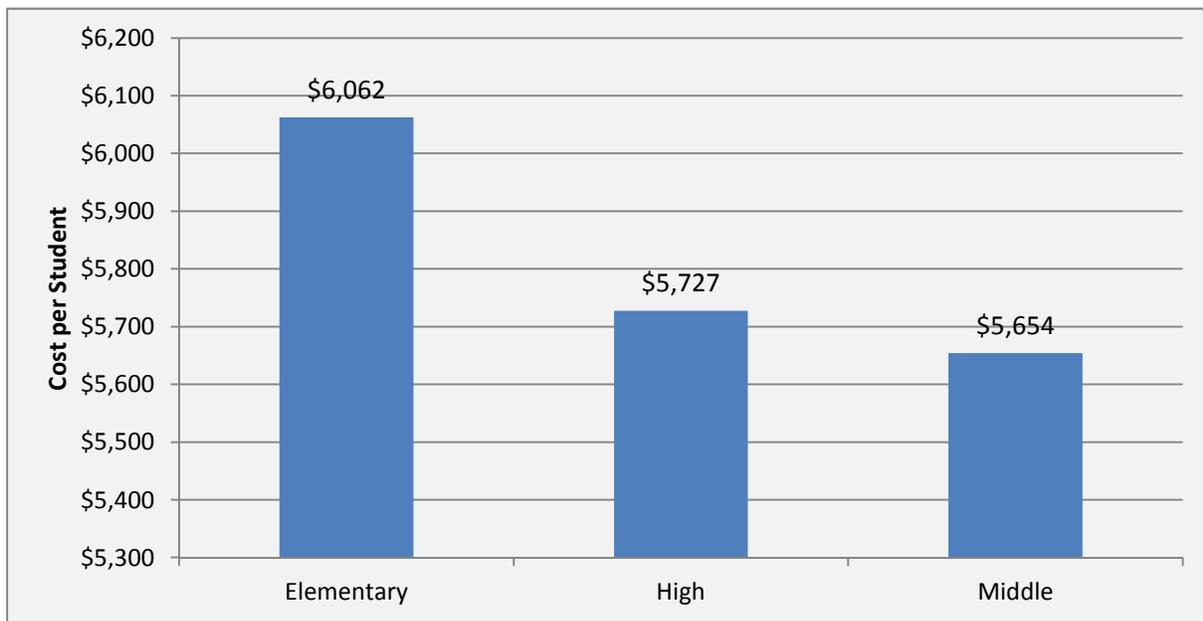
Object Description	Direct Classroom	Percent	Indirect Costs	Percent	Total	Percent
Teacher Salaries	\$249,331,453	54%	\$3,966,388	1%	\$253,297,841	35%
Medical Insurance	51,126,322	11%	14,211,984	6%	\$65,338,306	9%
Transfers To Other Funds	0	0%	35,640,747	14%	\$35,640,747	5%
Pro-rate by state series	778,678	0%	27,775,029	11%	\$28,553,707	4%
State Retirement	26,220,620	6%	1,710,067	1%	\$27,930,687	4%
Social Security	19,248,385	4%	4,099,834	2%	\$23,348,219	3%
Janitorial Services	900,400	0%	22,300,271	9%	\$23,200,671	3%
Electricity	15,717,851	3%	1,822,899	1%	\$17,540,750	2%
Guidance Personnel	15,324,391	3%	1,124,952	0%	\$16,449,343	2%
Bus Drivers	120	0%	15,164,960	6%	\$15,165,080	2%
Other Salaries & Wages	4,308,687	1%	10,039,497	4%	\$14,348,184	2%
Principal(s)	13,627,909	3%	0	0%	\$13,627,909	2%
Other Fringe Benefits	3,905,657	1%	7,773,297	3%	\$11,678,954	2%
Assistant Principal(s)	10,739,154	2%	0	0%	\$10,739,154	2%
Textbooks	0	0%	10,175,929	4%	\$10,175,929	1%
Other (under \$10,000,000)	54,044,404	12%	93,361,373	38%	\$147,405,777	22%
<b>Grand Total</b>	<b>\$465,274,031</b>	<b>100%</b>	<b>\$249,167,227</b>	<b>100%</b>	<b>\$714,441,258</b>	<b>100%</b>

Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures.

When direct classroom expenditures are analyzed by school type, elementary schools spend 50 percent of direct classroom expenditures, not including special school expenditures. Middle and high schools split the remaining half. Elementary schools also spend more per student than middle and high schools. During 2012-2013, elementary schools spent \$6,062 per student compared to \$5,727 and \$5,654 for high and middle schools, respectively.

**Exhibits 11-11** and **11-12** present direct classroom expenditures by type of school. The exhibits do not include special schools since they do not neatly fit into the definition of a traditional school and consist of the alternative learning centers, adult education, the transition program, and online education for example.

**Exhibit 11-11  
Overview of Direct Cost per Student by School Type  
2012-2013**



Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures and School Enrollment by Type Provided by School System.

**Exhibit 11-12  
Direct Classroom Expenditures by School Type  
2012-2013**

Type of School	Expenditures	Percentage	Enrollment	Cost Per Student
Elementary	\$223,968,422	50%	36,944	\$6,062
Middle	\$111,143,452	25%	19,657	\$5,654
High	\$113,414,504	25%	19,803	\$5,727
<b>Direct Classroom Expenditures (Excluding Special Schools)</b>	<b>\$448,526,378</b>	<b>100%</b>	<b>76,404</b>	<b>\$5,870</b>

Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures and School Enrollment by Type Provided by School System.

When direct classroom expenditures are analyzed by object, teacher salaries comprise a slightly higher percentage of direct classroom expenditures in elementary schools than in middle or high schools. Guidance counselor and assistant principal percentages are slightly higher in the high schools, which is to be expected because more assistant principals are needed to address discipline issues and counselors are needed to provide guidance about “next step” life choices. Percentages for other direct classroom expenditures are relatively consistent across elementary, middle, high and special schools.

**Exhibit 11-13** presents direct classroom expenditure categories by type of school. Costs greater than \$10,000,000 are categorized separately; costs less than \$10,000,000 are grouped together as “Other Direct Classroom Costs.”

**Exhibit 11-13  
Direct Classroom Expenditures Greater than \$10,000,000 by Type of School  
2012-2013**

Expenditure Description	Elementary Schools		Middle Schools		High Schools		Total	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Teachers	\$125,102,991	56%	\$57,576,876	52%	\$58,336,336	51%	\$241,016,203	54%
Medical Insurance	25,379,851	11%	12,093,527	11%	11,882,570	10%	49,355,948	11%
State Retirement	12,907,310	6%	6,228,163	6%	6,251,926	6%	25,387,399	6%
Social Security	9,368,344	4%	4,613,662	4%	4,627,660	4%	18,609,666	4%
Electricity	6,378,599	3%	4,067,553	4%	4,681,955	4%	15,128,107	3%
Guidance Personnel	4,819,164	2%	4,680,679	4%	5,313,529	5%	14,813,372	3%
Principal(s)	7,388,582	3%	3,482,764	3%	2,365,209	2%	13,236,555	3%
Assistant Principal(s)	3,138,734	1%	3,141,616	3%	4,391,610	4%	10,671,960	2%
Other Direct Classroom Costs	29,484,847	14%	15,258,612	13%	15,563,709	14%	60,307,168	15%
<b>Total</b>	<b>\$223,968,422</b>	<b>100%</b>	<b>\$111,143,452</b>	<b>100%</b>	<b>\$113,414,504</b>	<b>100%</b>	<b>\$448,526,378</b>	<b>100%</b>

Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures.

**Exhibit 11-14** presents a detail of special school expenditures. Charter schools account for their own expenditures and are not included in the School System’s expenditures. Therefore, charter schools are not included in the analyses in this chapter.

**Exhibit 11-14**, however, includes expenditures for Smithson Craighead Academy Career, which is a charter school. During 2012-2013, \$4,661 related to a career ladder program was recorded on the School System’s books for this charter school.

**Exhibit 11-14  
Detail of Special School Expenditures  
2012-2013**

School Name	Purpose	Actual Expenditures 2012-2013	Percent of Total
Harris-Hillman Special Ed	Special Education	\$ 2,296,823	14%
Robertson Academy	Gifted and Talented	2,216,312	13%
Cora Howe Exception Ed	Special Education	1,866,187	11%
Special Ed Early Childhood	Special Education	1,568,938	9%
Johnson School	Special Education	1,542,530	9%
Jere Baxter ALC	Alternative Learning	1,483,114	9%
Bass ALC	Alternative Learning	1,375,220	8%
Murrell School	Special Education	1,374,955	8%
*McCann ALC	Alternative Learning	1,011,737	6%
Virtual School of Nash	Non traditional	727,618	4%
Bass Transitions Program	Alternative Learning	482,149	3%
Bass Adult High School	Adult Education	379,730	2%
*Cohn Adult High School	Adult Education	137,037	1%
**East Middle	Non traditional	132,542	1%
Homebound	Non traditional	126,999	1%
McGruder Assess Center	Non traditional	20,146	<1%
Smithson Craighead Academy	Charter School	4,661	<1%
Johnson ALC	Alternative Learning	502	<1%
Cohn ALC	Alternative Learning	454	<1%
<b>Grand Total</b>		<b>\$ 16,747,654</b>	<b>100%</b>

Source: Actual 2012-2013 Expenditure Database provided by the School System. The purpose of each school was obtained from the 2013-2014 Budget Book, page 168.

\*School is closed.

\*\*East Middle is located at the East Nashville Magnet School site, which has 2 buildings. One building houses grades 5-8. These are residual expenses coded to East Middle. Most of the expenses are coded to East Nashville Magnet.

Note: Percentages may not add to 100 percent due to rounding.

### **SPENDING BY CLUSTER**

The School System is divided into 12 geographical regions known as clusters. The Whites Creek, Hillwood, and McGavock are the largest clusters geographically as shown in **Exhibit 11-15**.

**Exhibit 11-15**  
**Metropolitan Nashville Public Schools, School Cluster Map**



*Source: Metropolitan Nashville Public Schools 2013-2014 Budget Book.*

Clusters are identified by high school names. Elementary and middle schools in each cluster feed into the cluster's high school. The McGavock cluster is the largest with 17 schools consisting of 11 elementary, 4 middle, 1 high as well as the Academy at Opry Mills.

**Exhibit 11-16** provides an overview of school clusters. Because of their unique nature and purpose, the special schools listed in **Exhibit 11-14** on the previous page are not included in the clusters in **Exhibit 11-16** nor are they included in the analyses that follow.

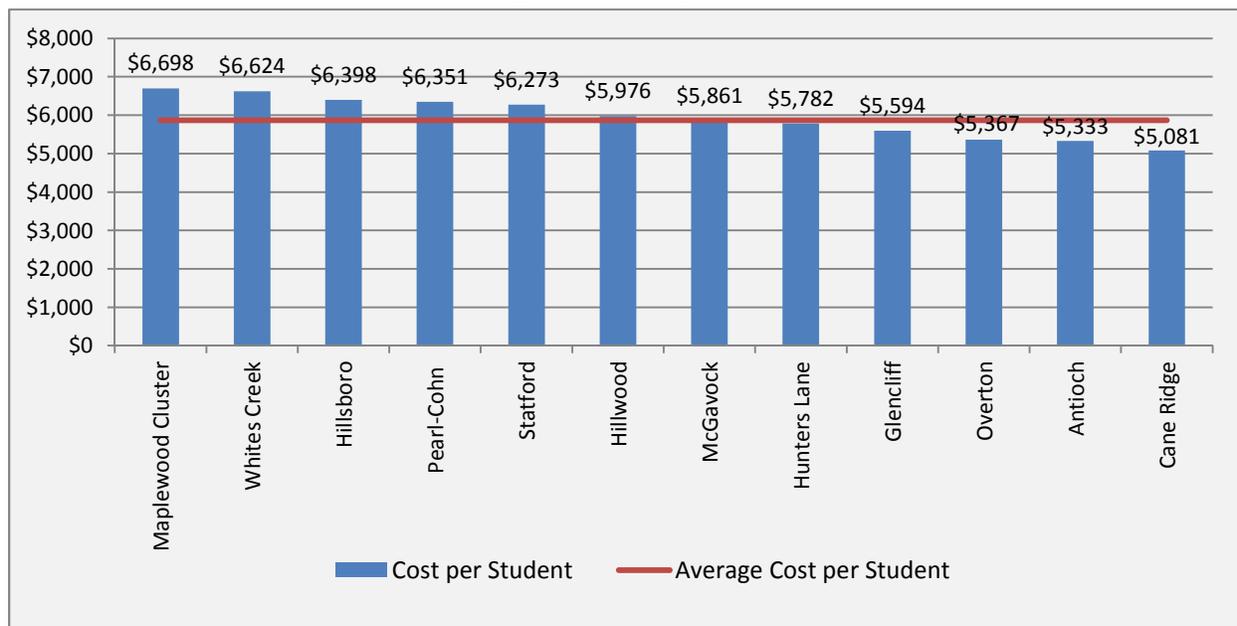
**Exhibit 11-16  
Overview of School Clusters**

Cluster	Elementary	Middle	High	Total Schools
McGavock	11	4	2	17
Statford	7	3	2	12
Pearl-Cohn	6	3	4	13
Hunters Lane	7	3	1	11
Hillsboro	6	3	2	11
Glenciff	6	2	2	10
Overton	6	3	1	10
Antioch	5	3	2	10
Whites Creek	5	4	1	10
Maplewood Cluster	6	2	1	9
Hillwood	4	2	3	9
Cane Ridge	4	2	1	7
<b>Total</b>	<b>73</b>	<b>34</b>	<b>22</b>	<b>129</b>

Source: Metropolitan Nashville Public Schools Website and School Cluster Information Provided by School System.

**Exhibit 11-17** presents cost per student per cluster and shows that the Maplewood cluster has the highest cost per student while Cane Ridge has the lowest. The average cost per student across all clusters is \$5,870. This amount is based upon direct classroom expenditures for traditional schools only. It does not include indirect or special school expenditures. Six clusters have a cost per student above the \$5,870 average and six are below the average.

**Exhibit 11-17  
Cost per Student by Cluster**



Source: Metropolitan Nashville Public Schools general ledger download of 2012-2013 Expenditures and Free and Reduced Lunch, Enrollment, and School Cluster Information Provided by School System.

### **COST PER STUDENT AND STUDENTS ON FREE AND REDUCED-LUNCH**

**Exhibit 11-18** represents average cost per student and the percentage of students eligible for free and reduced-lunch by cluster. The exhibit does not include special or charter schools.

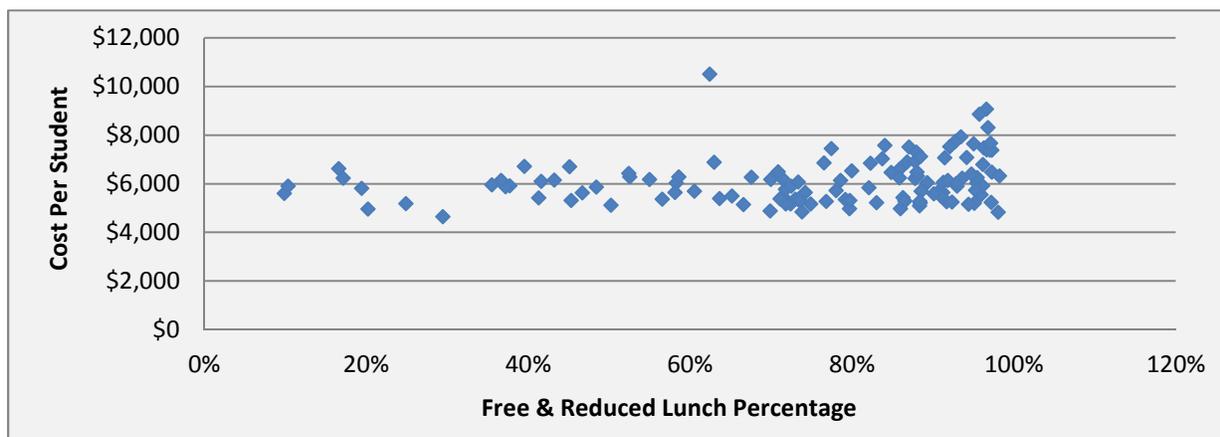
**Exhibit 11-18  
School Cluster Enrollment, Cost per Student, and Free and Reduced-Lunch  
2012-2013**

Cluster	2012-2013 Expenditures	Enrollment	Average Cost per Student	Percent of Students on Free and Reduced-Lunch
Maplewood Cluster	\$26,345,078	3,933	\$6,698	94%
Whites Creek	25,681,655	3,877	\$6,624	84%
Hillsboro	36,018,544	5,630	\$6,398	41%
Pearl-Cohn	46,535,116	7,327	\$6,351	67%
Statford	35,099,810	5,595	\$6,273	72%
Hillwood	30,530,168	5,109	\$5,976	54%
McGavock	58,495,822	9,980	\$5,861	68%
Hunters Lane	37,876,175	6,551	\$5,782	86%
Glenciff	36,424,179	6,511	\$5,594	86%
Overton	42,679,940	7,953	\$5,367	71%
Antioch	42,661,170	7,999	\$5,333	80%
Cane Ridge	30,178,721	5,939	\$5,081	78%
<b>Grand Total</b>	<b>\$448,526,378</b>	<b>76,404</b>	<b>\$5,870</b>	

Source: Metropolitan Nashville Public Schools general ledger download of 2012-2013 Expenditures and Free and Reduced-Lunch, Enrollment, and School Cluster Information Provided by School System.

**Exhibit 11-19** compares cost per student to the percentage of students on free and reduced-lunch for the traditional schools in the School System. Generally, the School System spends more per student in those schools that have a higher percentage of students on free and reduced-lunch. The tendency of the data points to rise slightly as the free and reduced-lunch percentage approaches 100 percent indicates that some schools with a high percentage of disadvantage students spend more dollars per student.

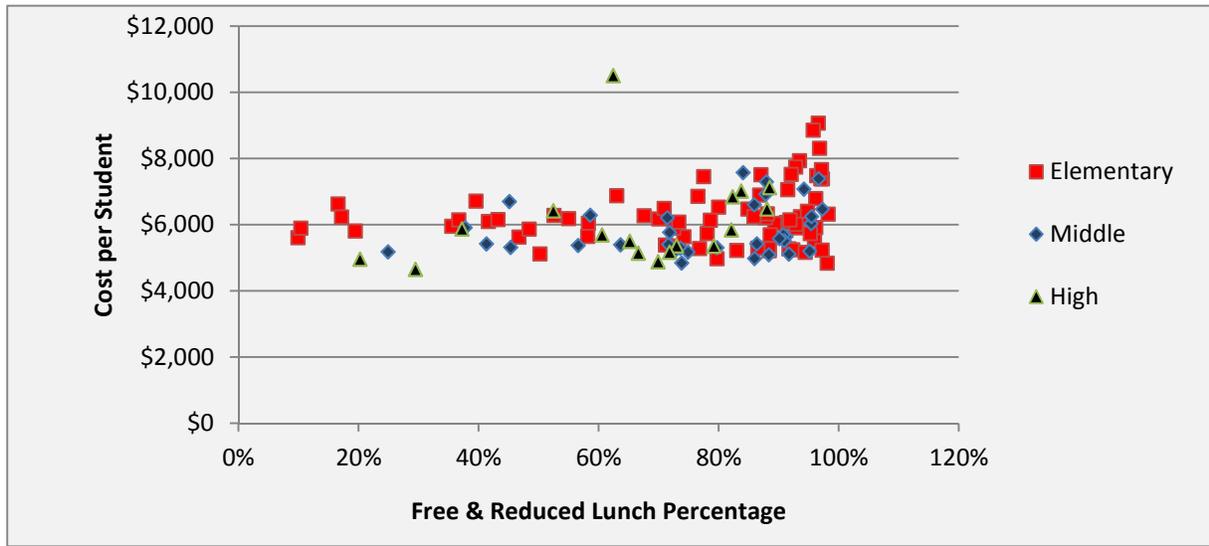
**Exhibit 11-19  
District-wide Comparison of Cost per Student and  
Percentage of Student on Free and Reduced-Lunch  
2012-2013**



Source: Metropolitan Nashville Public Schools general ledger download of 2012- 2013 expenditures and free and reduced-lunch, enrollment, and school cluster information provided by School System.

**Exhibit 11-20** indicates that elementary schools are driving the School System’s tendency to allocate more money to schools with a high percentage of disadvantaged students.

**Exhibit 11-20**  
**Comparison of Cost per Student and Percentage of Student on**  
**Free and Reduced-Lunch by School Type**  
**2012-2013**



*Source: Metropolitan Nashville Public Schools General Ledger download of 2012-2013 Expenditures and Free and Reduced-Lunch, Enrollment, and School Type Information Provided by School System.*

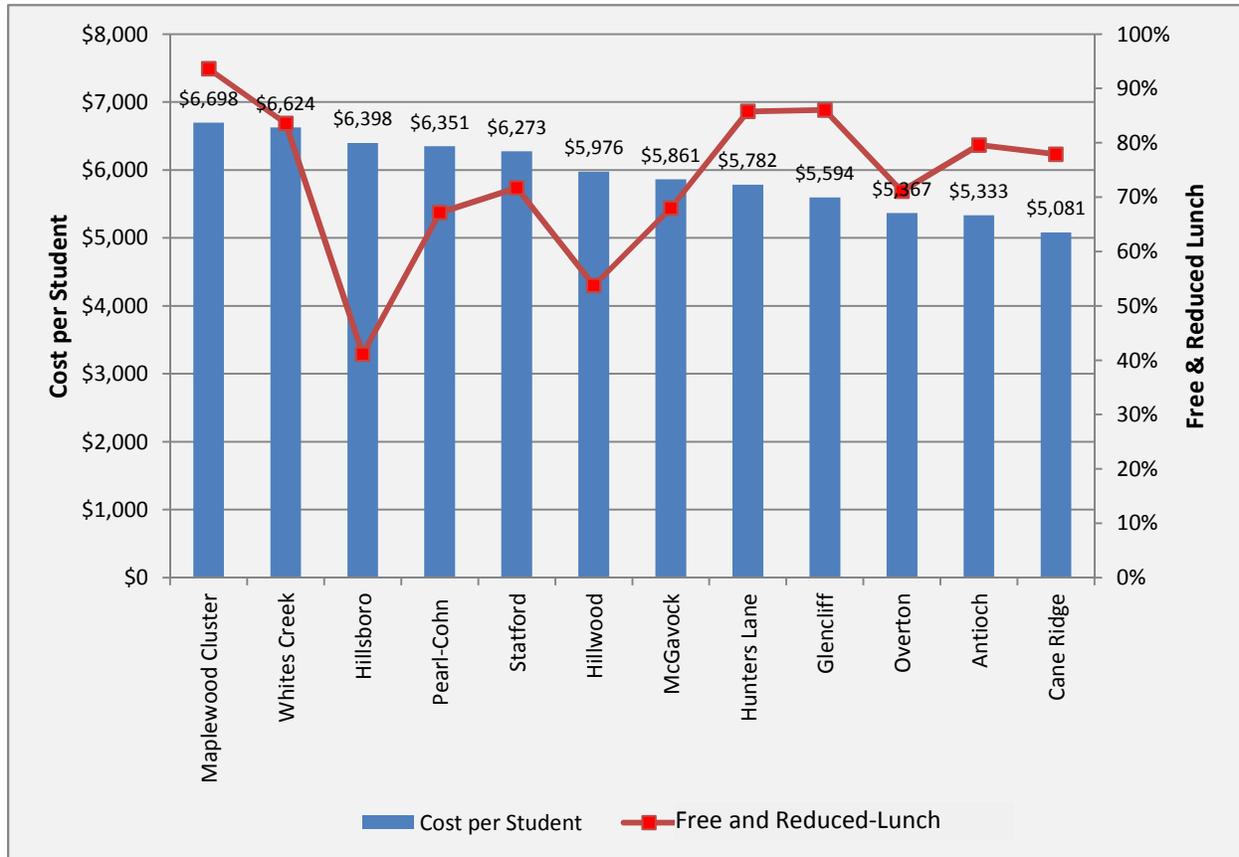
The tendency to allocate more funds to schools with higher percentages of students on free and reduced-lunch is not as apparent when the analysis is performed by cluster. This phenomenon may be due to how individual schools and school types are dispersed across the 12 clusters.

When cost per student and percentage of free and reduced-lunch are compared by cluster, the Maplewood and Whites Creek clusters have the first and second highest cost per student and the first and fourth highest percentage of students on free and reduced-lunch, respectively. The Hillsboro cluster has the third highest cost per student, but the lowest percentage of students on free and reduced-lunch.

The Glencliff and Hunters Lane clusters have the second and third highest percentage of students on free and reduced-lunch, respectively, but are ranked ninth and eighth, respectively, in terms of cost per student.

**Exhibit 11-21** presents cost per student for each cluster compared to the free and reduced-lunch percentages for schools in the cluster.

**Exhibit 11-21  
Comparison of Cost per Student and Percentage of Student on  
Free and Reduced-Lunch by Cluster  
2012-2013**



Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures and Free and Reduced-Lunch, Enrollment, and School Cluster Information Provided by School System.

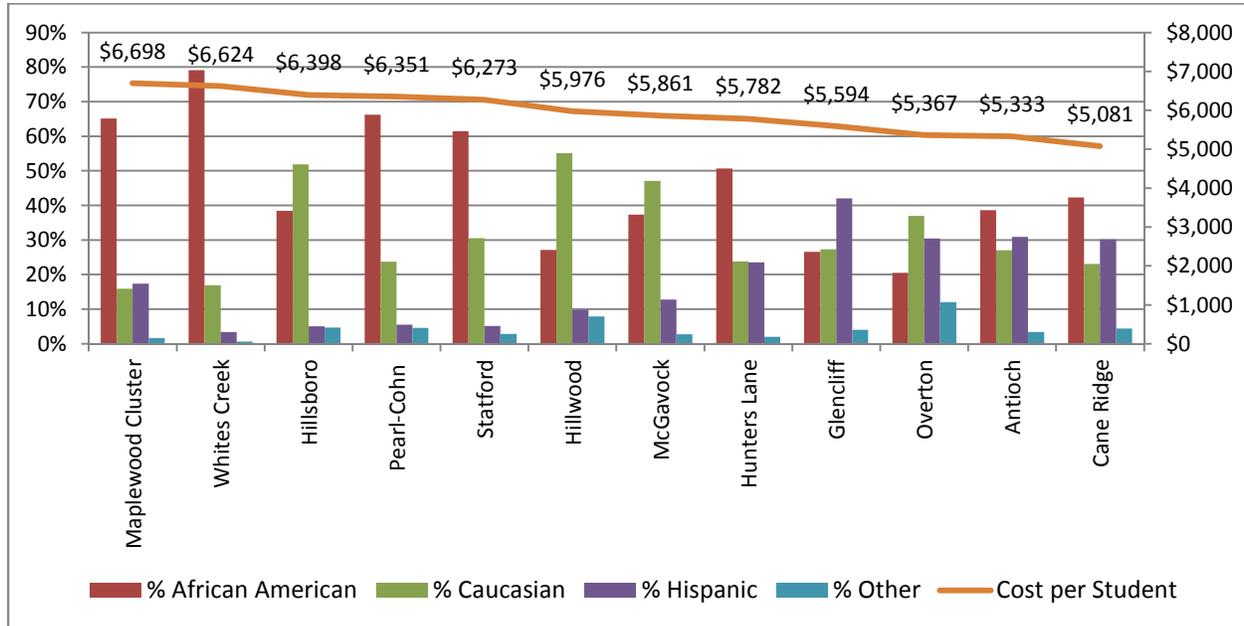
### **COST PER STUDENT AND STUDENT ETHNICITY**

When cost per student and ethnicity is compared by cluster, half the clusters spend an average of \$5,976 to \$6,698 per student while the other half spends between \$5,081 to \$5,861 per student. The average cost is \$5,870 per student.

Four of the five clusters with the highest cost per student have a majority of African American students. One of the five, Hillsboro, has a majority of Caucasian students. The Hillwood cluster has a majority of Caucasian students and has the sixth highest cost per student among the 12 clusters. The Glenciff cluster has a higher percentage of Hispanic students than any other cluster and has the fourth lowest cost per student.

**Exhibit 11-22** illustrates cost per student and ethnicity by cluster. **Exhibit 11-23** presents the detail of cost per student and ethnicity by cluster.

**Exhibit 11-22  
Comparison of Cost per Student and Ethnicity by Cluster  
2012-2013**



Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures and Student Ethnicity Information Provided by School System.

**Exhibit 11-23  
Ethnicity by School Cluster**

Cluster	Percent African American	Percent Anglo	Percent Hispanic	Percent Other	Cost per Student
Maplewood Cluster	65%	16%	17%	2%	\$6,698
Whites Creek	79%	17%	3%	1%	\$6,624
Hillsboro	39%	51%	5%	5%	\$6,398
Pearl-Cohn	66%	24%	6%	4%	\$6,351
Statford	61%	31%	5%	3%	\$6,273
Hillwood	27%	55%	10%	8%	\$5,976
McGavock	37%	47%	13%	3%	\$5,861
Hunters Lane	50%	24%	24%	2%	\$5,782
Glenciff	27%	27%	42%	4%	\$5,594
Overton	21%	37%	30%	12%	\$5,367
Antioch	39%	27%	31%	3%	\$5,333
Cane Ridge	42%	23%	30%	5%	\$5,081

Source: Metropolitan Nashville Public Schools General Ledger download of 2012-2013 Expenditures and Student Ethnicity Information Provided by School System.

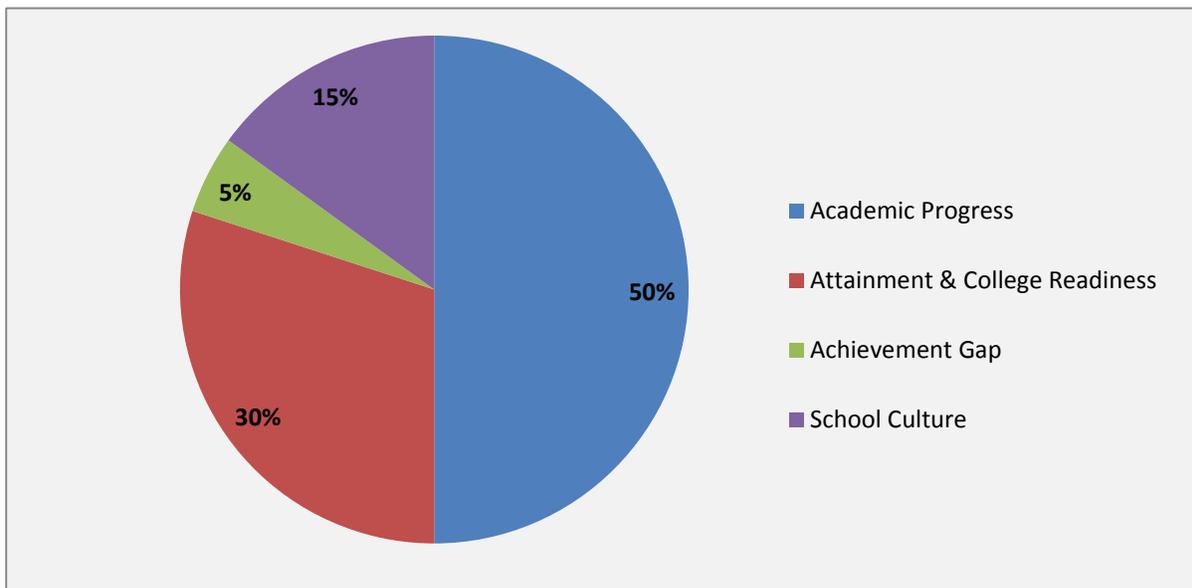
## **COST PER STUDENT AND ACADEMIC PERFORMANCE**

In addition to state accountability measures, the School System has developed a system for evaluating school performance known as the Academic Performance Framework. The School System uses four

categories of measures to evaluate school performance. The intent is to have a representative cross section of important measures, including critical indicators of student achievement and progress, that provide a fair and reliable picture of overall school performance. The measures and their assigned weights are described as follows and illustrated in **Exhibit 11-24**;

- **indicator 1, Academic Progress**—These measures reflect academic growth or improvement over time;
- **indicator 2, Attainment and College Readiness**—These measures are annual snapshots showing the number of students that meet high standards of achievement;
- **indicator 3, Achievement Gap**—These measures reflect the difference or gap in achievement between subgroups of students (school-wide) that are traditionally disadvantaged and their traditionally non-disadvantaged peers (district-wide); and
- **indicator 4, School Culture**—These measures reflect the culture of the school – the norms, values, beliefs, traditions, and expectations that direct school activities.

**Exhibit 11-24**  
**Academic Performance Framework Indicators and Weights**



Source: Metropolitan Nashville Public Schools Department of Research, Assessment & Evaluation Publication: *Academic Performance Framework: Executive Summary, December 2013.*

Using school data, performance points within each category are added up to compute an overall school performance composite. Schools are assigned one of the following five performance ratings based upon their composite score: Excelling, Achieving, Satisfactory, Review, or Target. **Exhibit 11-25** shows the numeric score ranges that correspond to the five performance ratings. The rating categories are color coded for ease of identification.

**Exhibit 11-25**  
**Legend of Academic Performance Ratings**

Numeric Score	Academic Performance Rating
0-19.99	Target
20-27.99	Review
28-54.99	Satisfactory
55-64.99	Achieving
65-100	Excelling

Source: Metropolitan Nashville Public Schools.

**Exhibit 11-26** summarizes cost per student by cluster and academic performance rating. The Academy at Opry Mills in the McGavock cluster and the Cohn School in the Hillsboro cluster did not have sufficient academic performance data and are therefore not included in the analysis. As a result, the cost per student in **Exhibits 11-23** and **11-26** are slightly different for these clusters.

**Exhibit 11-26**  
**Cost per Student by Cluster and Academic Performance Ratings**

Cluster	Academic Performance Rating	Enrollment	Expenditures FY 2013	Number of Schools	Average Cost per Student
Antioch	Target	954	\$5,318,060	2	\$5,574
	Review	2,528	\$12,956,555	3	\$5,125
	Satisfactory	2,265	\$12,257,650	3	\$5,412
	Achieving	2,252	\$12,128,905	2	\$5,386
<b>Antioch Total</b>		<b>7,999</b>	<b>\$42,661,170</b>	<b>10</b>	<b>\$5,333</b>
Cane Ridge	Target	2,107	\$10,932,526	3	\$5,189
	Review	1,582	\$7,948,528	2	\$5,024
	Satisfactory	2,250	\$11,297,667	2	\$5,021
<b>Cane Ridge Total</b>		<b>5,939</b>	<b>\$30,178,721</b>	<b>7</b>	<b>\$5,081</b>
Glenciff	Target	2,143	\$11,919,904	4	\$5,562
	Review	1,605	\$8,879,750	3	\$5,533
	Satisfactory	1,538	\$8,474,756	2	\$5,510
	Achieving	1,225	\$7,149,769	1	\$5,837
<b>Glenciff Total</b>		<b>6,511</b>	<b>\$36,424,179</b>	<b>10</b>	<b>\$5,594</b>
Hillsboro	Satisfactory	4,717	\$29,884,567	8	\$6,336
	Achieving	389	\$2,443,111	1	\$6,280
	Excelling	402	\$2,250,157	1	\$5,597
<b>Hillsboro Total</b>		<b>5,508</b>	<b>\$34,577,835</b>	<b>10</b>	<b>\$6,278</b>
Hillwood	Satisfactory	4,367	\$25,141,858	6	\$5,757
	Achieving	656	\$4,630,289	2	\$7,058
	Excelling	86	\$758,020	1	\$8,814
<b>Hillwood Total</b>		<b>5,109</b>	<b>\$30,530,167</b>	<b>9</b>	<b>\$5,976</b>
Hunters Lane	Target	1,289	\$7,272,700	2	\$5,642
	Review	1,483	\$8,385,279	3	\$5,654
	Satisfactory	3,465	\$20,170,780	5	\$5,821
	Excelling	314	\$2,047,416	1	\$6,520
<b>Hunters Lane Total</b>		<b>6,551</b>	<b>\$37,876,175</b>	<b>11</b>	<b>\$5,782</b>
Maplewood Cluster	Review	1,190	\$7,886,936	3	\$6,628
	Satisfactory	2,743	\$18,458,141	6	\$6,729
<b>Maplewood Cluster Total</b>		<b>3,933</b>	<b>\$26,345,077</b>	<b>9</b>	<b>\$6,698</b>

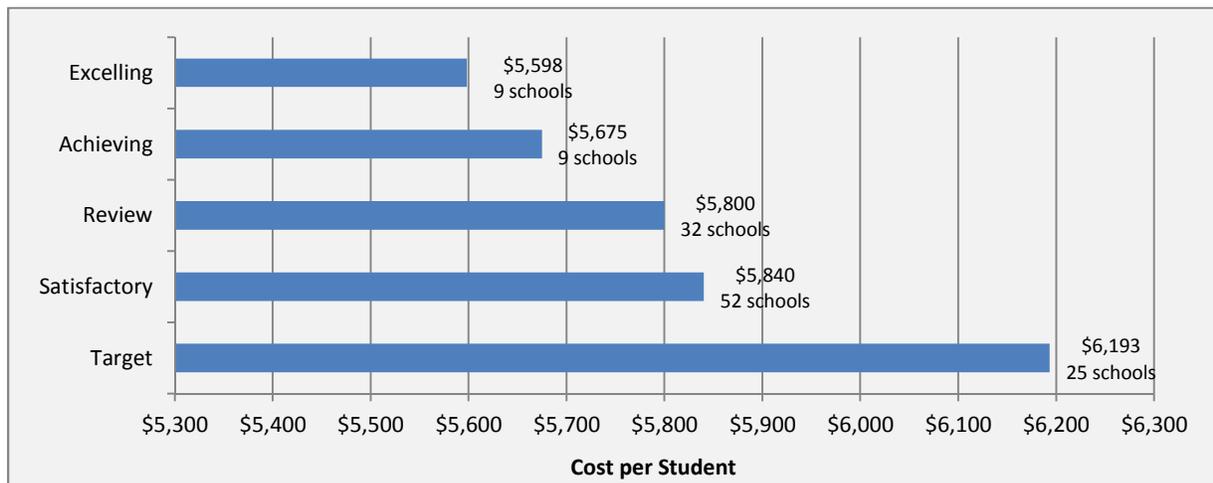
**Exhibit 11-26  
Cost per Student by Cluster and Academic Performance Ratings (Cont'd)**

Cluster	Academic Performance Rating	Enrollment	Expenditures FY 2013	Number of Schools	Average Cost per Student
McGavock	Target	1,106	\$7,583,095	2	\$6,856
	Review	3,838	\$22,535,793	8	\$5,872
	Satisfactory	4,512	\$25,135,342	5	\$5,571
	Excelling	413	\$2,533,354	1	\$6,134
<b>McGavock Total</b>		<b>9,869</b>	<b>\$57,787,584</b>	<b>16</b>	<b>\$5,855</b>
Overton	Review	2,465	\$12,915,146	2	\$5,239
	Satisfactory	4,381	\$23,131,858	6	\$5,280
	Excelling	1,107	\$6,632,937	2	\$5,992
<b>Overton Total</b>		<b>7,953</b>	<b>\$42,679,941</b>	<b>10</b>	<b>\$5,367</b>
Pearl-Cohn	Target	2,596	\$18,709,966	5	\$7,207
	Review	517	\$3,999,514	1	\$7,736
	Satisfactory	1,533	\$10,690,511	4	\$6,974
	Achieving	1,510	\$7,694,138	2	\$5,095
	Excelling	1,171	\$5,440,987	1	\$4,646
<b>Pearl-Cohn Total</b>		<b>7,327</b>	<b>\$46,535,116</b>	<b>13</b>	<b>\$6,351</b>
Statford	Target	676	\$4,853,617	2	\$7,180
	Review	1,640	\$10,799,876	4	\$6,585
	Satisfactory	1,779	\$10,932,158	3	\$6,145
	Achieving	518	\$3,124,301	1	\$6,031
	Excelling	982	\$5,389,858	2	\$5,489
<b>Statford Total</b>		<b>5,595</b>	<b>\$35,099,810</b>	<b>12</b>	<b>\$6,273</b>
Whites Creek	Target	1,686	\$11,181,574	5	\$6,632
	Review	1,610	\$10,744,216	3	\$6,673
	Satisfactory	581	\$3,755,865	2	\$6,464
<b>Whites Creek Total</b>		<b>3,877</b>	<b>\$25,681,655</b>	<b>10</b>	<b>\$6,624</b>

Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures and Academic Performance Data.

During 2012-2013, the School System invested more General Fund Purpose dollars in the poorest academically performing schools. The School System spent an average of \$6,193 per student in 25 schools with a Target academic performance rating compared to \$5,598 per student in 9 schools with an Excelling performance rating. A total of 52 schools had a satisfactory academic rating and incurred expenditures of \$5,840 per student, which is below the \$5,870 average cost per student for all traditional schools within the School System. **Exhibit 11-27** presents cost per student based on academic performance ratings.

**Exhibit 11-27**  
**Cost per Student based on Academic Performance Ratings**



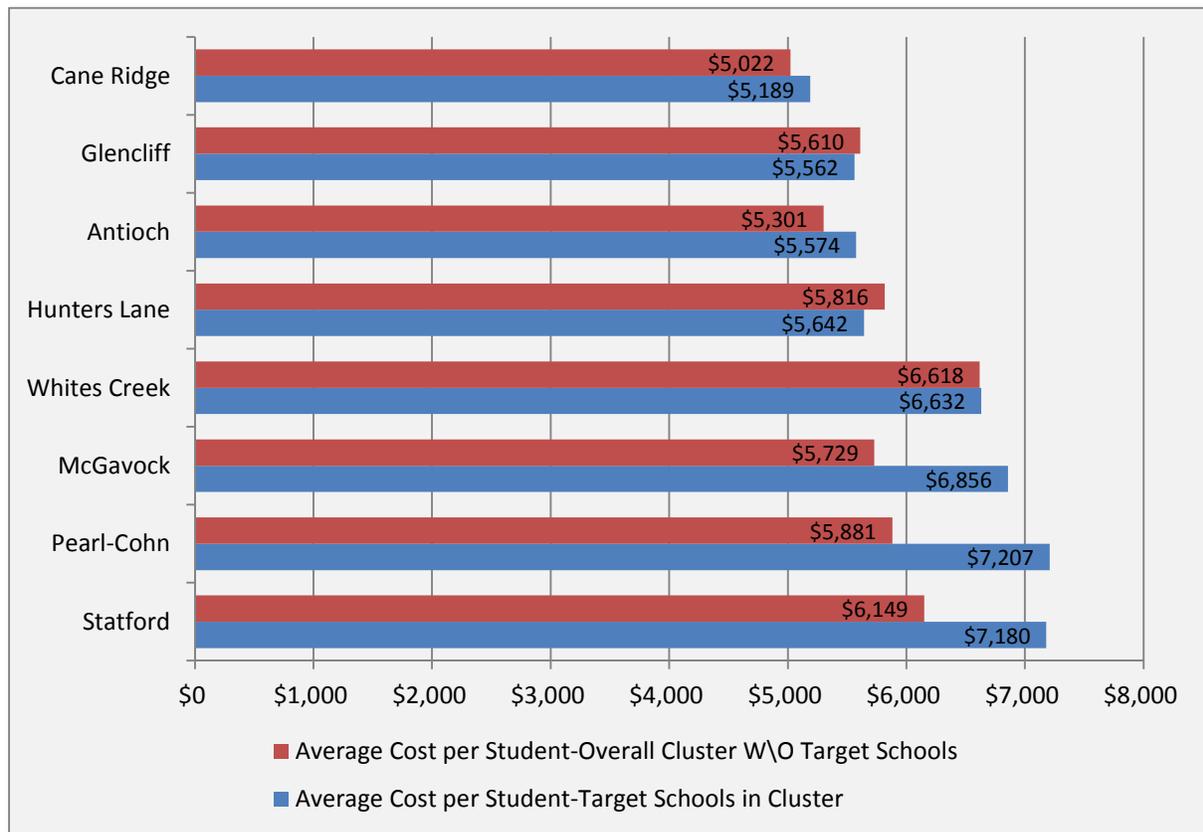
Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures and Academic Performance Data.

When academic performance and cost per student are analyzed by cluster, the Whites Creek and Pearl-Cohn clusters had 5 of the 25 schools in the Target academic performance category followed by Glenclyff with 4 and Cane Ridge with 3. Antioch, Hunters Lane, McGavock, and Stafford clusters each had two schools with Target ratings.

The Glenclyff and Hunters Lane clusters spent less per student for Target schools than was spent on average for the cluster not counting the target schools. Glenclyff's average cost per student for schools in the Target category was \$5,562 compared to an average of \$5,610 for the cluster as a whole without Target schools. Cost per student for Target schools in the Hunters Lane cluster was \$5,642 compared to an average cost of \$5,816 for the cluster as a whole, excluding Target schools.

In contrast, the McGavock, Pearl-Cohn, and Stafford clusters spent 117 to 123 percent more per student for Target schools than the average cost per student excluding Target schools. **Exhibit 11-28** compares cost per student for schools with Target ratings compared to the average cost per student for the cluster as a whole, excluding Target schools.

**Exhibit 11-28**  
**Cost per Student for Target Schools Within and Among Clusters**



Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures and Academic Performance Data.

The 25 target schools consist of 11 elementary schools, 12 middle schools, and 2 high schools. Fifteen of the 25 schools incurred per student expenditures greater than the School System average of \$5,870 per student. Cost per student for these 15 schools ranged from \$6,027 to \$8,304. The remaining schools in the Target group spent below the average and the cost per student ranged from \$5,089 to \$5,758.

The 25 target schools are predominately minority with high percentages of students eligible for free and reduced-lunch. The ethnic makeup of these schools ranges from 55 to 98 percent minority and 72 to 97 percent free and reduced-lunch. **Exhibit 11-29** presents an overview of the 25 Target schools.

**Exhibit 11-29**
**Cost per Student and Selected Demographics for Schools with a Target Academic Rating**

School	Cluster	Free & Reduced Lunch	Percentage African American	Percentage Hispanic	Percentage Caucasian	Cost per Student
Napier Elementary	McGavock	97%	92%	5%	3%	\$8,304
Academy at Hickory Hollow High School	Antioch	not available	40%	35%	20%	\$8,092
Robert Churchwell Museum Magnet Elementary	Pearl-Cohn	95%	91%	3%	3%	\$7,639
Haynes Middle	Whites Creek	84%	95%	2%	3%	\$7,568
Buena Vista Elementary	Pearl-Cohn	96%	97%	2%	2%	\$7,471
McKissack Middle	Pearl-Cohn	97%	73%	10%	17%	\$7,387
Ross Elementary	Statford	97%	79%	16%	5%	\$7,380
Pearl Cohn High School	Pearl-Cohn	88%	90%	4%	5%	\$7,113
Bailey Middle	Statford	94%	76%	7%	15%	\$7,071
Joelton Middle	Whites Creek	88%	61%	4%	34%	\$6,915
Bordeaux Elementary	Whites Creek	96%	86%	3%	10%	\$6,785
John Early Museum Magnet Middle	Pearl-Cohn	86%	85%	1%	11%	\$6,597
Glengarry Elementary	Glenclyff	94%	22%	56%	19%	\$6,228
Alex Green Elementary	Whites Creek	91%	85%	2%	12%	\$6,058
Brick Church Middle	Whites Creek	95%	83%	6%	10%	\$6,027
Dupont Tyler Middle	McGavock	72%	36%	17%	45%	\$5,758
Whitsitt Elementary	Glenclyff	95%	17%	65%	16%	\$5,726
Madison Middle School	Hunters Lane	91%	66%	18%	16%	\$5,685
Cameron Middle	Glenclyff	91%	28%	43%	25%	\$5,640
Neelys Bend Middle	Hunters Lane	90%	35%	38%	26%	\$5,579
Una Elementary	Antioch	87%	37%	29%	31%	\$5,280
Maxwell Elementary	Cane Ridge	77%	34%	34%	27%	\$5,274
Cane Ridge Elementary	Cane Ridge	83%	52%	23%	23%	\$5,211
Wright Middle	Glenclyff	92%	26%	43%	25%	\$5,107
Antioch Middle	Cane Ridge	88%	40%	32%	22%	\$5,089

Source: Metropolitan Nashville Public Schools General Ledger Download of 2012-2013 Expenditures and Free and Reduced-Lunch, Ethnicity, and Academic Performance Data provided by School System.

**2012-2013 PEER COMPARATIVE ANALYSIS**

Peer school data was used to provide a basis of comparison with the School System. Peers were selected by the School System and the review team using information from the National Center for Education Statistics. Drivers for selection included urban population, K-12 population, and Income greater than \$100,000. The income driver was inversely related because parents within this population tend to send their children to private schools. Selected peers are shown in **Exhibit 11-30**.

**Exhibit 11-30**
**List of Peer Districts**

Arlington Independent School District, TX
Austin Independent School District, TX
Baltimore City Public School, MD
Duval County School District, FL
Mesa Unified District, AZ
Prince George's County Public Schools, MD
Denver County School District 1, CO

Source: Metropolitan Nashville Public Schools and National Center for Education Statistics

The School System spends the second lowest percentage of total expenditures for general purposes, 62 percent, compared to Prince George’s County Schools, which spends the highest at 85 percent. Denver spends the lowest at 39 percent. The School System’s debt service is 5 percent of total expenditures, which, is fourth lowest among the peers.

Government-wide expenditures for 2012-2013 for each peer, as reported in their respective Comprehensive Annual Financial Report are detailed in **Exhibit 11-31**. These amounts represent total spending from all sources.

**Exhibit 11-31  
Summary of 2012- 2013 Governmental Fund Expenditures  
Metropolitan Nashville Public Schools and Peer Districts**

Peer District	General Fund Expenditures	Special Revenue Fund	Debt Service Fund	Capital Projects Fund	Other Funds	Total Government Expenditures
Prince George’s County	\$1,641,602,425	\$64,525,564	\$67,443,439*	\$165,762,560	\$0	\$1,939,333,988
<b>Percentage of Total</b>	<b>85%</b>	<b>3%</b>	<b>3%</b>	<b>9%</b>	<b>0%</b>	<b>100%</b>
Denver	\$626,770,620	\$190,431,298	\$589,677,089	\$123,722,836	\$80,484,195	\$1,611,086,038
<b>Percentage of Total</b>	<b>39%</b>	<b>12%</b>	<b>37%</b>	<b>8%</b>	<b>4%</b>	<b>100%</b>
Baltimore	\$1,175,541,000	\$132,999,000	\$20,069,000	\$64,135,000	\$43,413,000	\$1,436,157,000
<b>Percentage of Total</b>	<b>82%</b>	<b>9%</b>	<b>1%</b>	<b>4%</b>	<b>3%</b>	<b>100%</b>
Metropolitan Nashville	\$714,441,258	\$88,369,468	\$51,817,449	\$0	\$293,907,114**	\$1,148,535,289
<b>Percentage of Total</b>	<b>62%</b>	<b>8%</b>	<b>5%</b>	<b>0%</b>	<b>11%</b>	<b>100%</b>
Duval County	\$868,435,832	\$67,992,935	\$23,406,459	\$46,893,000	\$111,458,588	\$1,118,186,814
<b>Percentage of Total</b>	<b>78%</b>	<b>6%</b>	<b>2%</b>	<b>4%</b>	<b>10%</b>	<b>100%</b>
Austin	\$818,019,246	\$146,603,226	\$94,800,428	\$53,216,411	\$1,471,080	\$1,114,110,392
<b>Percentage of Total</b>	<b>73%</b>	<b>13%</b>	<b>9%</b>	<b>5%</b>	<b>0%</b>	<b>100%</b>
Arlington	\$424,144,895	\$114,345	\$57,541,848	\$43,796,910	\$43,134,796	\$568,732,794
<b>Percentage of Total</b>	<b>75%</b>	<b>0%</b>	<b>10%</b>	<b>8%</b>	<b>8%</b>	<b>100%</b>
Mesa	\$365,844,529	\$0	\$38,599,819	\$14,689,182	\$112,802,048	\$531,935,578
<b>Percentage of Total</b>	<b>69%</b>	<b>0%</b>	<b>7%</b>	<b>3%</b>	<b>21%</b>	<b>100%</b>

Source: Peer Districts: Comprehensive Annual Financial Reports. Metropolitan Nashville Public Schools: General Ledger Download of 2012-2013 Expenditures.

\*Prince George’s County accounts for debt service in the General Fund. The amount is shown in this column for purposes of comparison.

\*\*This amount includes \$162,530,003 of debt refunding and new debt issuance costs. Principal and interests cost on School System debt totaled \$51,817,449, as shown in the Debt Service column in the table and on page B-10 of the Metropolitan Nashville Government 2012-2013 Comprehensive Annual Financial Report.

When comparing government-wide expenditures per student, the School System ranks fifth highest among seven peers at \$14,747 per student. When comparing cost per student for general purpose funds, the School System also ranks fifth with \$9,173 per student. The School System debt of \$665 per student is fifth highest among the peers.

**Exhibit 11-32** presents a comparison of total, general purpose, and debt service expenditures for the School System and its peers. Amounts for the School System include both traditional and special schools unlike in earlier calculations.

**Exhibit 11-32**
**Comparison of General Purpose and Debt Expenditures per Student School System and Peers**

Peer District	Total Government-wide Expenditures	General Fund Expenditures	Debt Service Fund	Student Enrollment	Government-wide Expenditures per Student	General Fund Expenditures per Student	Debt Expenditures per Student
Prince George's County	\$1,939,333,988	\$1,641,602,425	\$67,443,439	123,741	\$15,673	\$13,266	\$545
Denver	\$1,611,086,038	\$626,770,620	\$589,677,089	84,424	\$19,083	\$7,424	\$6,985
Baltimore	\$1,436,157,000	\$1,175,541,000	\$20,069,000	84,748	\$16,946	\$13,871	\$237
Metropolitan Nashville	\$1,148,535,289	\$714,441,258	\$51,817,449	77,885*	\$14,747	\$9,173	\$665
Duval County	\$1,118,186,814	\$868,435,832	\$23,406,459	126,763	\$8,821	\$6,851	\$185
Austin	\$1,114,110,392	\$818,019,246	\$94,800,428	86,233	\$12,920	\$9,486	\$1,009
Arlington	\$568,732,794	\$424,144,895	\$57,541,848	65,001	\$8,750	\$6,525	\$885
Mesa	\$531,935,578	\$365,844,529	\$38,599,819	63,575	\$8,367	\$5,755	\$607

Source: Peer Districts: Comprehensive Annual Financial Reports. Metropolitan Nashville Public Schools: General Ledger Download of 2012-2013 Expenditures and enrollment data.

\* This enrollment figure does not include charter schools. It was provided by the School System in the initial data submission but does not agree with enrollment per the 2013-2014 Budget Book, which includes charter schools and shows student enrollment of 81,033.

The School System spends 72 percent of general purpose funds on Instruction, which is the highest percentage among the peers. It is also tied for second place in the lowest percentage (2 percent) spent on administrative costs and is second to last in the percentage spent for support services (17 percent).

**Exhibit 11-33** compares the School System and peer costs by function as a percentage of total Fiscal 2013 General Purpose Fund expenditures.

**Exhibit 11-33**
**Comparison of General Purpose Expenditures by Function-School System and Peers**

Peer District	Instruction & Related Services	Percent	Support Services	Percent	Administration	Percent	Other	Percent	Total General Purpose Expenditures
Metropolitan Nashville	\$515,118,418	72%	\$118,570,185	17%	\$11,789,532	2%	\$68,963,123	10%	\$714,441,258
Baltimore	\$821,963,000	70%	\$273,333,000	23%	\$80,245,000	7%	\$0	0%	\$1,175,541,000
Arlington	\$285,509,412	67%	\$125,171,069	30%	\$6,135,169	1%	\$7,329,245	2%	\$424,144,895
Duval County	\$572,748,837	66%	\$282,514,096	33%	\$11,402,570	1%	\$1,770,329	0%	\$868,435,832
Mesa	\$215,197,545	59%	\$38,219,309	10%	\$35,657,451	10%	\$76,770,224	21%	\$365,844,529
Austin	\$427,096,644	52%	\$246,557,865	30%	\$17,762,523	2%	\$126,602,214	15%	\$818,019,246
Prince George's County	\$834,931,119	51%	\$750,391,771	46%	\$55,879,630	3%	\$399,905	0%	\$1,641,602,425
Denver	\$364,156,448	30%	\$238,682,147	20%	\$12,628,363	1%	\$600,980,751	49%	\$1,216,447,709

Source: Peer Districts: Comprehensive Annual Financial Reports. Metropolitan Nashville Public Schools: General Ledger Download of 2012-2013 Expenditures.

## **PEER COMPARISONS – NATIONAL CENTER FOR EDUCATION STATISTICS**

The National Center for Education is the primary federal entity for collecting and analyzing data related to education in the United States and other nations. The following exhibits represent the latest available peer data – School Year 2010-2011. **Exhibit 11-34** compares the School System demographic data with that of the selected peers.

**Exhibit 11-34**  
**Metropolitan Nashville Public Schools and Peer Demographics Information National Center**  
**for Education Statistics - 2010-2011**

District	Number of Schools	Number of Students	Classroom Teacher FTE	Student Teacher Ratio	ELL Students
Arlington ISD	77	64,484	4,148.29	15.54	10,211
Austin ISD	127	85,697	6,093.62	14.06	22,030
Baltimore County Public Schools	173	104,160	7,455.03	13.97	3,353
Boston	131	56,037	4,260.34	13.15	7,712
Davidson County	140	78,782	5,526.20	14.26	8,437
Duval	191	123,997	7,993.00	15.51	3,828
Guilford County Schools	121	73,205	4,926.07	14.86	5,956
Knox County	87	57,977	3,879.30	14.95	1,428
Mesa Unified District	93	65,123	3,379.38	19.27	4,842
Prince George's County Public Schools	207	126,671	8,314.15	15.24	14,126
Denver	158	78,339	4,681.44	16.73	24,174

Source: National Center for Education Statistics, School Year 2010-2011.

Cost per student is detailed in **Exhibit 11-35**. As noted, for 2010-2011, the School System's expenditure per student was consistent with the average for the peers identified.

**Exhibit 11-35**  
**Expenditure Analysis per Student National Center**  
**for Education Statistics - 2010-2011**

District	Total Current Expenditures Per Student	Instructional Expenditures Per Student	Student and Staff Support Per Student	Administration Per Student	Operations Per Student	Total Expenditures Per Student
Arlington ISD, TX	7,779.09	5,082.33	816.26	647.09	1,233.41	8,950.28
Austin ISD, TX	9,431.92	5,510.05	1,101.88	1,078.52	1,741.46	12,366.29
Baltimore County Public Schools, MD	13,251.59	8,063.34	1,314.27	1,533.69	2,340.30	14,423.20
Duval, FL	8,986.96	5,422.78	1,173.35	793.72	1,597.11	10,061.78
Guilford County Schools, NC	8,683.70	5,339.46	813.91	868.41	1,661.92	10,250.88
Mesa Unified District, AZ	7,530.06	4,436.68	933.73	578.89	1,580.76	8,400.37
Prince George's County Public Schools, MD	13,775.40	7,992.20	1,334.42	1,451.15	2,997.64	15,223.07
Denver County School District	10,468.12	5,286.64	1,264.87	2,368.16	1,548.45	14,057.23
<b>Peers Average</b>	<b>9,988</b>	<b>5,892</b>	<b>1,094</b>	<b>1,165</b>	<b>1,838</b>	<b>11,717</b>
<b>Davidson County, TN</b>	<b>9,800</b>	<b>5,633</b>	<b>1,360</b>	<b>1,041</b>	<b>1,766</b>	<b>10,820</b>

Source: National Center for Education Statistics, School Year 2010-2011.

## CHAPTER 12 – PERFORMANCE ACCOUNTABILITY SYSTEMS

### BACKGROUND

Performance measurement and accountability is an important element of an overall conceptual approach to managing school districts and public agencies. A 2010 report authored by the National Performance Management Advisory Commission defined performance management as follows:

*Performance management in the public sector is an ongoing, systematic approach to improving results through evidence based decision-making, continuous organizational learning, and a focus on accountability for performance. Performance management is integrated into all aspects of an organization's management and policy-making processes, transforming and organization's practices so it is focused on achieving improved results.*

### WHY MEASURE PERFORMANCE?

The saying, "What gets measured gets done," has been attributed to Peter Drucker, Tom Peters, and Edward Deming. Certainly, what is measured gets attention. However, school system administrators should ensure that measures reflect the "right things" and measures focus on what really matters.

Performance accountability is measuring and reporting the results of educational programs and administrative/operational functions, and support services based on a school system's clearly stated goals, objectives, and measurable outcomes. Further, the board and director of schools can use these measurable outcomes to develop, monitor, and enforce expectations for staff performance. An effective performance accountability system integrates planning and budgeting, along with reviewing, evaluating and reporting results used to improve the performance of programs, operations, and cost efficiency.

Metropolitan Nashville Public Schools (the School System) is in the process of implementing a detailed educational and academic performance accountability system to monitor its five-year strategic plan, Education 2018: Excellence for Every Student. The assistant director for Program Results Management worked with the executive leadership team to design the performance accountability system around its "Coherence Framework," which is aligned with student and system wide performance goals, objectives, and strategies.

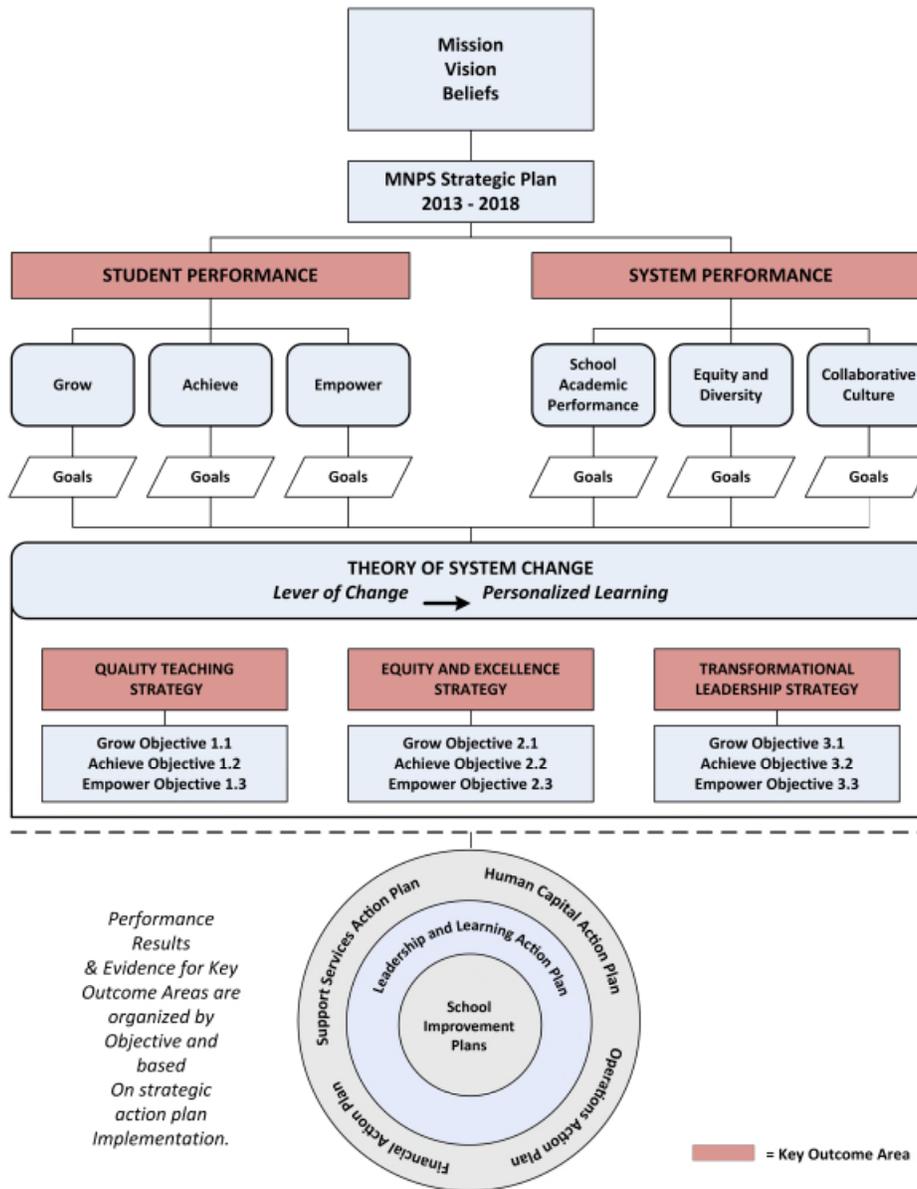
### CHAPTER HIGHLIGHTS

- Performance measurement promotes accountability and provides a conceptual framework for monitoring and managing School System operations.
- The School System is implementing a detailed educational and academic performance accountability system tied to its five-year strategic plan, Education 2018: Excellence for Every Student.
- The School System's performance accountability system is designed around its "Coherence Framework," which is aligned with student and system wide performance goals, objectives, and strategies.
- While the School System has planned a comprehensive performance accountability framework, it needs to do a better job of evaluating educational programs.
- The School System is a member of the Council of Great City Schools and has access to some of the Council's key performance indicators to analyze and manage operations.
- The School System should develop a formal performance accountability system to better manage and oversee administrative and operational functions on a monthly basis.

The Coherence Framework has evolved over time through lessons learned and opportunities for continued improvement. It provides an accountability roadmap to ensure student and educational and academic performance have a guide for all actions and activities toward achieving performance goals necessary to execute the School System’s mission, vision and beliefs.

**Exhibit 12-1** below graphically depicts the School System’s “Coherence Framework” based on its comprehensive strategic plan.

**EXHIBIT 12-1**  
**Metropolitan Nashville Public Schools Strategic Plan 2013–2018**  
**System Coherence Framework for Performance Accountability**



Performance Results & Evidence for Key Outcome Areas are organized by Objective and based On strategic action plan implementation.

= Key Outcome Area

Source: Metropolitan Nashville Public Schools’ Coherence Framework, Office of the Director of Schools, June 2014.

The School System’s Coherence Framework outlines three specific strategies to achieve nine objectives necessary to attain student and system performance goals. Accordingly, School Improvement Plans and Division Action Plans form the backbone of the performance accountability system. School Improvement Plans for 2014–2015 directly align school-level actions to executing the nine system-wide objectives. Division Action Plans for every central office division contain specific actions linked to the same objectives to support school and system-level actions/improvements to execute strategies related to Quality Teaching, Equity and Excellence, and Transformational Leadership. School and divisional budgets align with the same strategies, objectives, and actions included in the action plans.

Each action plan includes detailed action steps, measurable outcomes, and yearly targets to facilitate monitoring performance accountability at the program level. Measurable outcomes and targets at the program level are the foundation for division-level key performance indicators to allow executive level monitoring of performance, attendant accountability, and reporting.

McConnell Jones Lanier & Murphy, LLP (or the review team) identified two best practices against which to evaluate Performance Accountability Systems. **Exhibit 12-2** below provides a summary of Performance Accountability best practices that the School System was measured against resulting in observations, which we discuss in the body of the chapter.

**BEST PRACTICES**

**EXHIBIT 12-2**  
**Summary of Best Practices - Performance Accountability Systems**

Best Practice Number	Description of Best Practice	Met	Not Met	Explanation
1.	<b>Academic Program Accountability and Program Evaluation.</b> A system is in place to measure academic and educational performance. A program evaluation system is methodologically sound and determines the effectiveness of programs and initiatives and their contribution to student achievement. Evaluation results and recommendations are developed into an implementation plan. Implementation is monitored on a periodic basis and its impact on program improvement is assessed.		X	<b>Observation 12-A</b>
2.	<b>Performance Accountability Systems.</b> The school system clearly reports on the performance of its major administrative and operational support functions.		X	<b>Observation 12-B</b>

Source: McConnell Jones Lanier & Murphy LLP Review Team.

## DETAILED OBSERVATIONS

### EDUCATIONAL PROGRAM EVALUATION

#### OBSERVATION 12-A

**The School System’s Research Assessment and Evaluation Department has not conducted regular evaluations of system programs and initiatives to determine their effectiveness and contribution to and impact on student performance. While the School System has planned a comprehensive performance accountability framework, educational programs have not been consistently evaluated.**

The Research Assessment and Evaluation Department organizational chart consists of a number of program evaluation-related positions, including coordinator program evaluation, program evaluator, and program evaluation analyst. In addition, there are several positions supporting evaluations such as coordinator of research and data analysis, coordinator of statistical and research science, and data quality advisor. However, the department’s focus has not been on program evaluation.

Although the School System has been going through a process of restructuring and changing programs and implementing multiple new initiatives, it has only evaluated three programs since 2009-2010, which include the English Language Learner program (2010), the Special Education program (2012), and the Gifted and Talented program (2012). All three evaluations were conducted by external organizations, of which one evaluation was requested by the state. The Schools System contracted for an outside evaluation in 2014 as a follow-up to the 2010 evaluation of its English Language Learner program. The Research Assessment and Evaluation Department has not had a direct role in any of these evaluations.

As a best practice model, Dallas Independent School District has an extensive program evaluation system, managed through its Evaluation and Assessment Department, consisting of three groups: Federal Title Evaluation, Special Projects, and School Improvement and Assessment. The department evaluates academic programs, district initiatives, grants, and federally funded projects and, to facilitate the process, has established a common evaluation and report organization framework consisting of:

- An executive summary or abstract.
- A program description.
- The stated purpose and scope of the evaluation.
- The major evaluation questions and for each question the associated methodology and results.
- A summary and recommendations.
- Appendices.

The Dallas Evaluation and Assessment Department posts all evaluation reports on its website. The reports are available in two formats: the full report and a brief “at-a-glance” summary.

**RECOMMENDATION 12-A.1****Design and implement a formal process for the evaluation of the School System's educational programs and initiatives.**

Ensure that each program and initiative is evaluated periodically; the evaluation results and recommendations are communicated to respective administrators, staff, and the Board and establish a timeline for the reporting on the status of the evaluations.

The Research Assessment and Evaluation Department executive director should:

- Develop a three-to-five year calendar showing the programs and initiatives that will be evaluated each year, giving priority to programs having the greatest impact on student performance.
- Develop an evaluation framework that will define the purpose and scope of the evaluation, articulate the measures and methodology, specify the type of data to be collected and methods of data collection, describe how the data is to be analyzed, and outline the contents of the evaluation report.
- Assume primary responsibility for recommending whether evaluations will be completed by the department or by an external entity. If the evaluation is to be contracted to an outside entity, participate in the development of the request for proposal and oversee and support the selected evaluator.
- Develop a self-evaluation component for annual evaluations and support programs and initiatives implementing annual self-evaluations.

The department should institutionalize follow-up evaluations conducted two or three years after the initial evaluation to determine if, how, and to what extent the program or initiative implemented the recommendations and the effects of the implementation. Initial and follow-up evaluation results should be presented to the Board.

**FISCAL IMPACT**

This recommendation can be implemented with existing resources.

**ADMINISTRATIVE OPERATIONAL PROGRAM ACCOUNTABILITY****OBSERVATION 12-B****A comprehensive performance measurement system exists within the School System; however, not all major administrative and operational functional areas are maximizing its use.**

The Council of the Great City Schools issues a publication each year entitled, *"Managing for Results in America's Great City Schools."* This report defines and presents an extensive array of statistical indicators developed by the Council of the Great City Schools and its member urban school districts to measure performance on a broad range of operational functions, including business services, finances, human resources and technology.

The Council of Great City Schools defines benchmarks so that urban school district members can assess their performance and set strategic goals based on operational data. Performance data publications prepared by the Council of Great City Schools state that when a district measures its performance and compares itself to others, it can better identify where it is successful, where it needs to improve, and how to do so strategically. Several other organizations such as the Texas School Performance Review, State of Ohio Auditors Office, and Florida Legislature’s Office of Program Policy Analysis and Government Accountability also publish similar best practice performance measure indicators that can be used by school districts to assist with improving operational areas.

The primary reason for establishing a performance measurement system is to ensure that appropriate data is collected and analyzed so that informed administrative and operational decisions are made about the respective functional areas.

The School System is a member of the Council of Great City Schools and regularly participates in its performance measurement benchmarking surveys. While the School System uses some of the Council of Great City Schools’ key performance indicators to analyze operations, its use of key performance indicators could be expanded. The following is a list of administrative and operational functional areas that could benefit from expanded use of performance indicators.

- Human Capital
- Financial Management
- Facilities Management
- Nutrition Services
- Transportation
- Safety and Security
- Technology Management

Knowing the extent to which certain administrative and operational functional areas are meeting goals helps to determine whether or not to continue, modify, or terminate how certain processes are performed and/or improved. Consistent analysis and evaluation is necessary to determine if administrative and operational functions are fully meeting the needs of the School System. Performance measurement helps identify weaknesses and pinpoints needed changes, which guide continuous improvement. Without administrative and operational performance measurement, the School System is limited in the ability to identify and address causes of poor performance and to develop strategies for increasing effectiveness.

#### **RECOMMENDATION 12-B.1**

**Develop a formal performance accountability system to better manage and oversee administrative and operational functions on a monthly basis.**

The School System should encourage all departments to identify relevant performance measures to manage and monitor operations and use the data to develop a comprehensive monthly performance accountability report that can be used collectively by the executive leadership team to measure to overall performance of the school system.

**Exhibit 12-3** on the following page presents a sample of traditional performance metrics and how they would be applied to administrative and operational departments. The definitions immediately below help to describe what the performance metrics are attempting to measure:

- **Productivity**, which quantifies the outputs and inputs of an organization and expresses the two as a ratio. Generally, the ratio is expressed as output to input.
- **Effectiveness**, which determines the relationship of an organization's outputs to what an organization is intended to accomplish.
- **Quality**, which examines an output or the process by which an output is produced. Quality is indicated by attributes such as accuracy (or error rate), thoroughness, and complexity.
- **Timeliness**, which evaluates the time involved producing an appropriate output.

The School System uses performance measures, but not consistently in all areas. For example, the accounts payable and procurement functions use performance measures as a management tool and they publish a monthly operations report summarizing results. Child Nutrition tracks and uses metrics such as meals per labor hour, food costs as a percentage of revenues, food and labor costs as a percentage of revenues, and average daily breakfast and lunch participation. The Technology and Information Services Department tracks and uses performance measures such as average age of computers, computer labs per school, technology spending per student, and number of computers per computer lab. The Transportation Department makes extensive use of performance measures and is in the process of implementing new maintenance software that will provide better data to expand their usage.

Statistical safety and security information concerning the number and type of disciplinary actions, number and types of incidents, number of searches, and the number of closed circuit television cameras is provided to the chief of Support Services for inclusion in a report to the board. However, although these statistics are captured, they could be used more effectively to manage safety and security operations. For example, the information is not being measured against performance targets and annual trends.

The Human Capital Department tracks performance measures such as teacher vacancy\turnover rates, substitute placement rates, and average worker's compensation claims; however, no evidence was provided indicating that this information is used to manage the department.

**Exhibit 12-3** provides examples of performance measures that could be used in various areas. The list, though not exhaustive, is a fairly comprehensive one that can be used as a reference. The asterisk in the exhibit denotes that the area is already using the key performance metric.

**EXHIBIT 12-3**  
**Sample Performance Measurement Framework**

Functional Administrative and Operational Areas	Samples of Key Performance Metrics
<p>Human Capital</p> <p><b>2 of 19 used =11% used</b></p>	<ul style="list-style-type: none"> <li>• Ratio of Human Capital staff per school system employee</li> <li>• Ratio of Human Capital staff per student</li> <li>• Human Capital department cost per student</li> <li>• Employee separation rate – teachers</li> <li>• Employee separation rate – certificated staff (excluding teachers)</li> <li>• Employee separation rate – support staff</li> <li>• Average number of days to fill teacher position</li> <li>• Average number of days to fill administrator position</li> <li>• Vacancy/turnover rate – teachers*</li> <li>• Vacancy/turnover rate – administrators</li> <li>• Vacancy/turnover rate – support staff</li> <li>• Teacher absence rate</li> <li>• Substitute placement rate</li> <li>• Worker’s Compensation cost per employee</li> <li>• Average worker’s compensation claim</li> <li>• Worker’s compensation lost workdays per 1,000 employees</li> <li>• Health benefits costs – certificated staff</li> <li>• Health benefits costs – support staff</li> <li>• Cost per pay check*</li> </ul>

**EXHIBIT 12-3**  
**Sample School System Performance Measurement Framework (Cont'd)**

Functional Administrative and Operational Areas	Samples of Key Performance Metrics
Financial Management  <b>9 of 24 used = 38%</b>	<ul style="list-style-type: none"> <li>• General Fund Balance Ratio – Unrestricted (GASB 54)*</li> <li>• Cash Management - Fund Reserves as Percent of Total Revenue*</li> <li>• Risk Management Average Cost per Liability Claim*</li> <li>• Accounts Payable Costs per \$1,000 of Accounts Payable dollars spent*</li> <li>• Accounts Payable Cost per Invoice*</li> <li>• Invoices Processed per FTE per month*</li> <li>• Days to process Accounts Payable invoices</li> <li>• Invoices processes per FTE</li> <li>• Invoices past due at time of payment</li> <li>• Payments voided</li> <li>• Purchasing Department costs per procurement dollar spent (percentage)*</li> <li>• Cost per purchase order</li> <li>• Cooperative purchasing ratio</li> <li>• Percent after the fact purchase orders</li> <li>• Average P-Card purchase amount</li> <li>• P-Card transactions ratio*</li> <li>• Procurement savings ratio</li> <li>• Grants receivable aging (weighted)*</li> <li>• Grant funds to total budget</li> <li>• Cost per pay advice (check or direct deposit) pay advices to payroll FTE</li> <li>• Percentage of employees on direct deposit</li> <li>• Hours per audit by school type</li> <li>• Percentage of audit findings resolved one year after audit</li> <li>• Audit hours per FTE</li> </ul>

**EXHIBIT 12-3  
Sample School System Performance Measurement Framework (Cont'd)**

Functional Administrative and Operational Areas	Samples of Key Performance Metrics
Facilities Management  <b>1 of 17 used = 6%</b>	<ul style="list-style-type: none"> <li>• Maintenance                             <ul style="list-style-type: none"> <li>– Overall maintenance cost per student</li> <li>– Maintenance and operations as a percentage of general fund expenditures</li> <li>– Average number of maintenance FTEs per trade/discipline (e.g., painters, carpenters, general services/general maintenance, HVAC, electricians, plumbers) per sq. ft. of buildings maintained</li> <li>– Average maintenance cost per labor hour by trade/discipline</li> <li>– Average cost per job by trade/discipline</li> <li>– Average number of days to complete emergency work orders by trade/discipline</li> <li>– Average number of days to complete regular/routine work orders by trade/discipline</li> <li>– Service satisfaction levels for maintenance function performed</li> <li>– Average number of days between preventive maintenance function</li> <li>– Service satisfaction level for maintenance performed</li> </ul> </li> <li>• Custodial Cost Per Student (Outsourced)*</li> <li>• Grounds (Athletic Fields)                             <ul style="list-style-type: none"> <li>– Average acreage maintained per grounds FTE employee</li> <li>– Service satisfaction level</li> </ul> </li> <li>• Energy (Tennessee or Southeast Region)                             <ul style="list-style-type: none"> <li>– Average number of sq. ft. per energy management FTE</li> <li>– Average usage/cost of electricity per sq. ft.</li> <li>– Average usage/cost for gas per sq. ft.</li> <li>– Average usage/cost for water per sq. ft.</li> </ul> </li> </ul>
Nutrition Services  <b>3 of 6 used = 50%</b>	<ul style="list-style-type: none"> <li>• Meals Per Labor Hour (MPLH)</li> <li>• Food costs as percentage of revenues</li> <li>• Labor costs as percentage of revenues</li> <li>• Total expenses as percentage of revenue*</li> <li>• Average daily breakfast participation (primary and secondary)*</li> <li>• Average daily lunch participation (primary and secondary)*</li> </ul>

**EXHIBIT 12-3  
Sample School System Performance Measurement Framework (Cont'd)**

Functional Administrative and Operational Areas	Samples of Key Performance Metrics
Transportation  <b>18 of 21 used = 86%</b>	<ul style="list-style-type: none"> <li>• Cost per Total Mile Operated – All Buses* (tracked but unreliable results due to lack of formal method to track mileage)</li> <li>• Transportation budget as a percent of total school system budget*</li> <li>• Cost per student overall*</li> <li>• Cost per regular education student*</li> <li>• Cost per exceptional education student*</li> <li>• Daily cost per bus regular education and exceptional education*</li> <li>• Yearly cost per bus regular education and exceptional education*</li> <li>• Cost per mile regular education and exceptional education*</li> <li>• Average buses per 100 students*</li> <li>• Capacity utilization*</li> <li>• Spare bus ratio*</li> <li>• Accident rate*</li> <li>• Average daily driver and monitor absence*</li> <li>• Average vehicle age*</li> <li>• Bus replacement backlog*</li> <li>• Buses per mechanic (tracked but can be improved with new maintenance software)</li> <li>• Scheduled service rate</li> <li>• Percentage of total fleet available per day*</li> <li>• Road call rate*</li> <li>• Inventory size*</li> <li>• Percentage of available time charged to work orders (not currently but will with implementation of new software)</li> </ul>
Safety and Security  <b>1 of 8 used = 13%</b>	<ul style="list-style-type: none"> <li>• Safety and Security expenditures as percent of general fund expenditures*</li> <li>• Percent of school sites requiring employee ID badges</li> <li>• Percent of school sites requiring visitor ID badges</li> <li>• Hours of training per school system security and law enforcement member</li> <li>• Arrests on school sites per 1,000 students</li> <li>• Percent of school sites with security camera systems</li> <li>• Percent of school sites with alarm systems</li> <li>• Percent of types of disciplinary actions</li> </ul>

**EXHIBIT 12-3  
Sample School System Performance Measurement Framework (Cont'd)**

Functional Administrative and Operational Areas	Samples of Key Performance Metrics
Technology Management  <b>8 of 23 used = 35%</b>	<ul style="list-style-type: none"> <li>• Average age of computers and replacement plan*</li> <li>• Computing devices per student/teacher/employee</li> <li>• Computer labs per school*</li> <li>• Number of computers per computer lab*</li> <li>• Spending for IT capital investments*</li> <li>• Spending for hardware/systems/services*</li> <li>• IT personnel cost</li> <li>• IT Contractor usage and cost*</li> <li>• IT personnel training hours and cost</li> <li>• IT spending per student*</li> <li>• IT spending percent of school system budget</li> <li>• Days network usage exceeded 75 percent of capacity</li> <li>• Wide-area network (WAN) downtime</li> <li>• Break fix staffing cost per ticket</li> <li>• First contact problem resolution rate</li> <li>• Help desk call abandonment rate*</li> <li>• Mean time to resolve problem tickets by type</li> <li>• Email system downtime</li> <li>• Student Information System (SIS) downtime</li> <li>• Enterprise Business System (EBS) downtime</li> <li>• Data warehouse downtime</li> <li>• Instructional technology training courses/hours</li> <li>• Cost savings from efficiency improvements</li> </ul>

*Source: McConnell Jones Lanier & Murphy LLP Review Team from Council of Great City Schools, Texas School Performance Review, State of Ohio Auditors Office, and Florida Legislature's Office of Program Policy Analysis and Government Accountability.*

*\*Indicates that Metropolitan Nashville Public Schools is using the key performance indicator as a Council of Great City Schools peer member.*

## FISCAL IMPACT SUMMARY

	RECOMMENDATION	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	TOTAL 5-YEAR (COSTS) OR SAVINGS	ONE TIME (COSTS) OR SAVINGS
<b>CHAPTER 12: PERFORMANCE ACCOUNTABILITY SYSTEMS</b>								
<b>12-A.1</b>	Design and implement a formal process for the evaluation of the School System's educational programs and initiatives.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>12-B.1</b>	Develop a formal performance accountability system to better manage and oversee administrative and operational functions on a monthly basis.	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTALS Chapter 12</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

## Management Response

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
Management of Metropolitan Nashville Public Schools should:			
12-A.1	Design and implement a formal process for the evaluation of the School System's educational programs and initiatives.	<p><b>Partially Accept</b></p> <p>MNPS currently evaluates many of its educational programs and initiatives. The Research, Assessment and Evaluation Department conducts much of the analysis included in program evaluations, and often works with outside agencies conducting evaluations to provide necessary data or assist in analysis and interpretation. MNPS notes that some grants require an independent evaluation.</p> <p>The audit lists three programs that have been evaluated since 2009-10, when in fact there have been many more. MNPS uses its Academic Performance Framework to evaluate many of its educational programs and initiatives. Some additional program and/or initiative evaluations include: Music Makes Us, Pre-Kindergarten, Career and Technical Education (CTE), MNPS Achieves, individual School Improvement Plan analysis/reviews, The Academies of Nashville, Reading Recovery, Social and Emotional Learning, Diversity Management, Community Achieves, Limitless Libraries and many others that vary in levels of complexity/detail.</p> <p>The district will review current evaluative protocols being used across the system for consideration of potential internal best practices that can be applied to a more strategic and comprehensive process. (e.g. School Improvement Plan evaluations, state and federally funded program and initiative evaluations, data warehouse reports relating to specific program participation).</p> <p>A protocol will be piloted and improvements made prior to taking it to scale. Evaluations will consist of predefined levels of complexity in the model design.</p>	December 2016
12-B.1	Develop a formal performance accountability system to better manage and oversee administrative and operational functions on a monthly basis.	<p><b>Accept</b></p> <p>As stated within the MJLM audit, many MNPS departments utilize the Council of the Great City Schools' (CGCS) Key Performance Indicators (KPI) as a mechanism for not only benchmarking performance, but also as a way to monitor performance on a monthly basis. Departments also have performance measures drafted within their strategic action plans which are aligned to the MNPS strategic plan, <b>Education 2018</b>.</p> <p>The focus going forward will be to expand the district's use of the CGCS KPI software tool in all divisions to inform progress being made on operational efficiencies and performance. In addition, each</p>	June 2016

## Management Response

	Recommendation	Concurrence and Corrective Action Plan	Proposed Completion Date
		<p>division's strategic action plan will be revisited to ensure a more concise/focused overview is being monitored with related performance indicators. The more detailed action plans already drafted will be used at the department level to provide greater background on areas of focus as needed.</p>	